

Corrective Measures Completion Report for the Corrective Measures Implementation at Solid Waste Management Unit 11, Laundry Effluent Pond and Waste Pile Areas

**Tooele Army Depot
Tooele, Utah**



Prepared for:
Sacramento District
U.S. Army Corps of Engineers
Sacramento, California
By North Wind, Inc.
Contract No. DACW05-00-D-0024, D.O. 006

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for the Corrective Measures Implementation
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Laundry Effluent Pond and Waste Pile Areas**

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ACRONYMS

bgs	below ground surface
CAO	corrective action objective
CAP	Corrective Actions Permit
CDQMP	Chemical Data Quality Management Plan
CFR	Code of Federal Regulations
CMCR	Corrective Measures Completion Report
CQCP	Contractor Quality Control Plan
EPA	Environmental Protection Agency
FTL	field team leader
HDPE	high-density polyethylene
HWD	hazardous waste determination
MDL	method detection limit
MPE	MP Environmental Services
MSAI	Mountain States Analytical, Inc.
NIOSH	National Institute of Occupational Safety and Health
OSHA	Occupational Safety and Health Administration
QCSR	Quality Control Summary Report
RAP	Remedial Action Plan
RCRA	Resource Conservation and Recovery Act
SSHP	Site Safety and Health Plan
SWMU	Solid Waste Management Unit
TEAD	Tooele Army Depot
USACE	United States Army Corps of Engineers

Corrective Measures Completion Report for the Corrective Measures Implementation at Solid Waste Management Unit 11, Laundry Effluent Pond and Waste Pile Areas

1. INTRODUCTION

North Wind, Inc. (North Wind) prepared this Corrective Measures Completion Report (CMCR) for the Sacramento District U.S. Army Corps of Engineers (USACE). This report documents the remediation of Solid Waste Management Unit (SWMU) 11, known as the Laundry Effluent Pond and Waste Pile Areas at the Tooele Army Depot (TEAD) in Utah. The purpose of this remediation was to implement the remedy selected in the *Corrective Measures Study Report* (Dames & Moore 2001) in compliance with the TEAD *Resource Conservation and Recovery Act (RCRA) Corrective Action Permit* (TEAD 2001).

2. SITE LOCATION AND HISTORY

The TEAD is located near the city of Tooele, Utah, approximately 35 miles southwest of Salt Lake City. The site was originally established by the U.S. Army Ordnance Department as the Tooele Ordnance Depot. The primary mission was the storage, maintenance, and demilitarization of military vehicles, topographic equipment, troop support items, power generators, and conventional munitions. In 1993, a portion of TEAD was placed on the Base Realignment and Closure list and the maintenance activities were transferred to another installation. The current mission of TEAD is the storage, maintenance, and demilitarization of conventional munitions. A Federal Facility Agreement was entered into between the U.S. Army, U.S. Environmental Protection Agency (EPA) Region VIII, and the State of Utah in 1991. A RCRA Post-Closure Permit was issued by the State of Utah in 1991 and reissued in 2001. This post closure permit includes a Corrective Action Permit (CAP) that requires actions at 40 SWMUs. SWMU 11 is one of the Known Release SWMUs identified in the permit.

SWMU 11 is located near Building 1252 (in the ammunition storage area) in the south-central portion of TEAD (Figure 1). Five discrete sites within the SWMU boundaries, referred to as the laundry effluent pond, sewage pond, and waste piles 1- 3, were identified for remedial action. The laundry effluent pond is an unlined earthen drainage pond that received laundry and shower discharges from Building 1267 for over 40 years, ceasing in 1990. Boiler blow-down was also discharged there until 1995. The sewage pond, also an unlined earthen drainage pond, was constructed in 1980 but was never put into service (AEEC 2002). The sewage pond may have received inadvertent flows from a nearby septic leach field. The waste pile area lies to the east of the laundry effluent pond. This area had been used for disposal of scrap metal, automobile parts, and construction debris; however, the bulk of the surface debris was removed in 1993.

3. REMEDIAL ACTION PLAN

This section summarizes the implementation requirements from the *Final Remedial Action Plan, SWMU 11, Laundry Effluent Pond and Waste Pile Areas* (RAP; AEEC 2002), including the corrective action requirements and approved variations to the RAP.

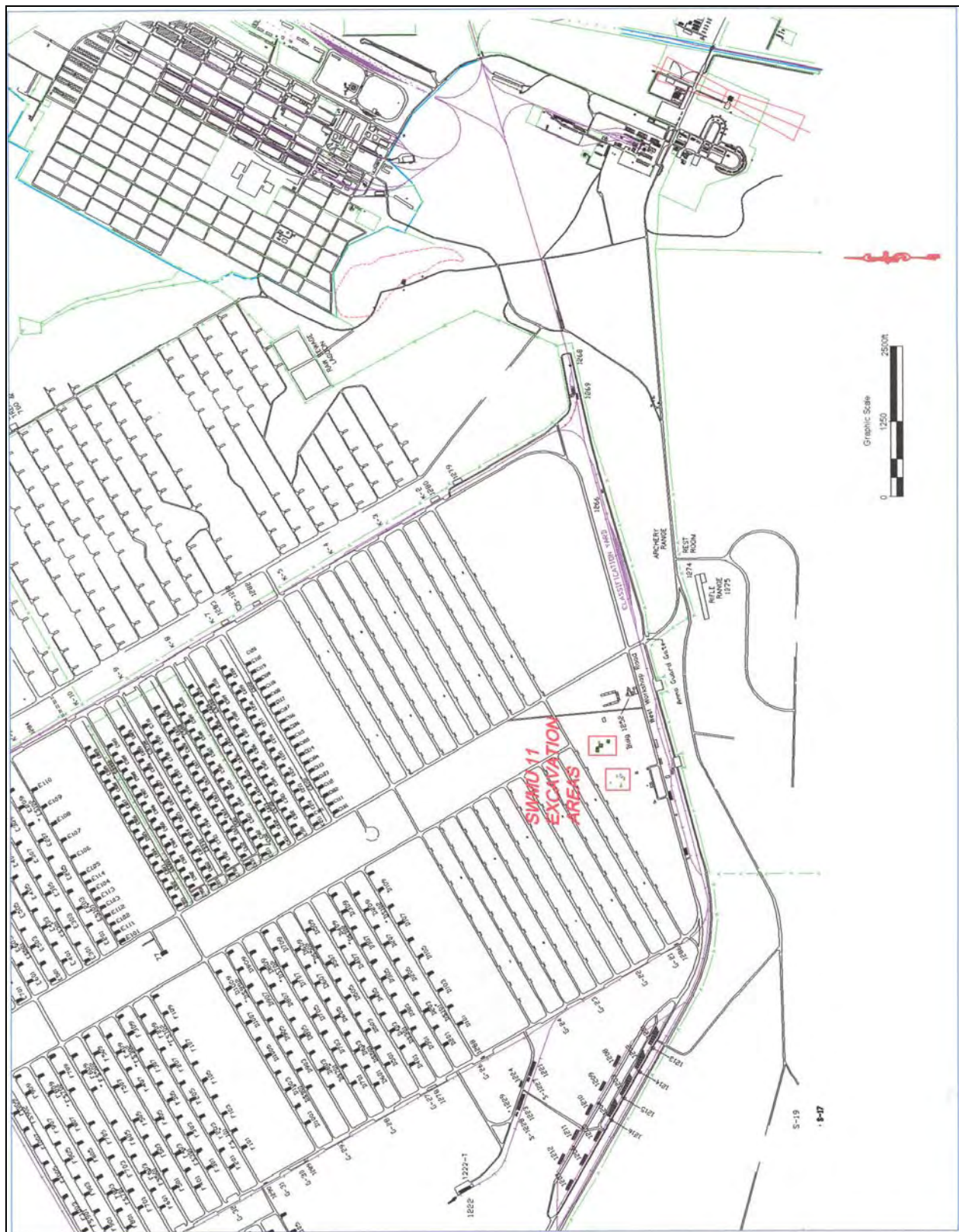


Figure 1. Location of SWMU 11 Laundry Pond and Waste Pile areas in the TEAD ammunition storage area.

3.1 Corrective Action Requirements

During the RCRA Facility Investigation (RFI; Rust E&I 1995), elevated concentrations of metals and semivolatile organic compounds were identified in both the sewage and laundry ponds. Soil samples collected from the waste pile areas exhibited high concentrations of metals. Contaminants were identified in surface soil samples and in borehole samples down to depths of 5 ft. The results of the investigation were further evaluated in the *Corrective Measures Study Work Plan* (Dames & Moore 2000). It was concluded that the contaminated soil in the laundry and sewage ponds and in the waste pile areas posed moderate risk for TEAD personnel and potential future construction workers at these sites.

Subsequently, a number of remedial action alternatives were evaluated in the *Corrective Measures Study Report* (Dames & Moore 2001). The selected remedial alternative for SWMU 11 included institutional controls and removal and off-site disposal of contaminated soils from the pond and waste pile areas to prevent potential exposure of human receptors. The *Corrective Measures Study Report* (Dames & Moore 2001) specified quantitative corrective action objectives (CAOs) for the removal action (Table 1).

Table 1. Corrective action objectives from the *Corrective Measures Study Report* (Dames & Moore 2001).

Contaminant	CAO (mg/kg)
Lead	1,800
Arsenic	32
bis(2-Ethylhexyl)phthalate	78
Benz(a)anthracene	2.2
Benzo(b)fluoranthene	2.2

The RAP (AEEC 2002) provided detailed guidance for implementing the selected remedial alternative and included requirements for the following actions:

1. **Preparatory Activities.** The RAP (AEEC 2002) identified requirements for preparation of field guidance documents, including a Site Safety and Health Plan (SSHP), dust control plan, contractor quality control plan (CQCP), site security plan, and a spill prevention plan.
2. **Excavation Activities.** The RAP (AEEC 2002) specified that sufficient soil be removed from the five excavation areas so that remaining soil concentrations fall below the CAOs. The RAP specified dimensions of each excavation area and estimated that soil in the five areas would need to be removed to a depth of 1 to 2 ft below grade.
3. **Confirmatory Sampling and Overexcavation.** The RAP (AEEC 2002) described a sampling strategy whereby discrete soil samples were to be collected from the bottoms and sidewalls of each excavation area to confirm whether post-excavation contaminant concentrations exceed their respective CAOs. Excavation would continue until CAOs were achieved or until otherwise directed by the USACE.
4. **Soil Disposal.** The RAP (AEEC 2002) required that waste soil removed from SWMU 11 be profiled, manifested, and transported to a licensed disposal facility in accordance with all federal and state regulations.
5. **Site Restoration.** The RAP (AEEC 2002) indicated that clean backfill would be brought in and placed in the completed excavations to bring the areas to grade.

3.2 Approved Variances from the Remedial Action Plan

The following two changes to the RAP were requested by North Wind and approved by the USACE prior to the start of the fieldwork. These modifications did not alter the remedial action, as selected in the *Corrective Measures Study Report* (Dames & Moore 2001), but did modify implementation guidance provided in the RAP. These changes were necessary to optimize the work activities and to address actual site conditions encountered at the time of the remedial action.

- **In situ characterization of soil for disposal.** The RAP (AEEC 2002) described a process whereby the soil would be excavated and temporarily stored on site while analysis and profiling was completed. However, because extreme winds can make stockpile management difficult at TEAD, North Wind was concerned that Army personnel in the SWMU 11 vicinity could potentially be exposed to lead and arsenic contaminated dust during the temporary accumulation period. North Wind proposed an alternative approach to USACE, TEAD, and Utah Department of Environmental Quality, whereby the waste soils would be characterized in place, prior to excavation, by collecting numerous samples at different depths throughout the excavation areas. This process provided a representative, yet conservative, waste profile because samples could be biased to high concentration locations. In addition, USACE saved approximately \$72,000 by eliminating the need for temporary accumulation and reloading of the waste soil.
- **Grading waste pile areas in lieu of backfilling.** The RAP (AEEC 2002) specified that after the CAOs are met, the waste pile excavations were to be returned to natural grade with clean backfill material. However, the USACE decided that because the excavations were shallow and were located in undeveloped areas on the depot, they should simply be graded to blend in with the surrounding topography without use of any additional backfill material. This approach was also supported by TEAD.

4. CORRECTIVE MEASURES IMPLEMENTATION

This section provides a summary of the corrective measures that were implemented at SWMU 11 in accordance with the requirements described in Section 3. Section 4.1 summarizes the preparatory work that was completed prior to the start of fieldwork. Section 4.2 describes the excavation activities and Section 4.3 describes the confirmatory sampling procedures and results. Section 4.4 describes the profiling and disposal of the hazardous waste. Section 4.5 describes the site restoration activities.

4.1 Preparatory Activities

4.1.1 Documentation

North Wind performed a substantial amount of preparatory work, which included developing field guidance documents and arranging for suppliers and services. The following preconstruction documents were prepared and submitted for USACE approval prior to construction:

- SSHP
- Site Security Plan
- Dust Control Plan
- Spill Prevention Plan
- Remedial Action Schedule
- CQCP.

4.1.2 Installation Clearances

During the preparatory phase of this project, North Wind submitted a request for an excavation permit to the TEAD office of public works. The excavation permit was approved prior to the start of fieldwork by the TEAD realty specialist, facilities support division, communications contractor, coaxial cable manager, the environmental office, and the installation support division. The excavation permit is provided in Appendix A.

4.1.3 Transportation, Treatment, and Disposal Services

Early in the planning process, North Wind arranged for transportation and disposal services. MP Environmental Services (MPE) of Grantsville, Utah was contracted to transport the waste soil to the disposal facility. MPE offers a range of transport options, including 22- and 30-ton end dump trucks and roll-off bins of various sizes. MPE had supported North Wind and the USACE on previous projects and provided highly qualified and professional drivers.

Clean Harbors of Salt Lake City was contracted to provide treatment and disposal services. Clean Harbors operates a number of licensed treatment, storage, and disposal facilities. Their Grassy Mountain, Utah site was selected to receive the waste soil. Prior to the start of fieldwork, Clean Harbors reviewed and approved the waste profiles and worked with MPE to schedule receipt of the transport trucks.

4.1.4 Support Services

Services were also arranged from a number of local suppliers for items such as equipment rental, waste transportation, surveying, sanitation services, etc. in preparation for the field activities. MPE was contracted for waste transport services and Clean Harbors of Salt Lake City provided waste disposal services.

4.2 Excavation Activities

This section describes the fieldwork performed at SWMU 11, including work control procedures, site security measures, decontamination procedures, field documentation procedures, and soil removal.

4.2.1 Work Control Procedures

North Wind developed an SSHP meeting the requirements established in the RAP (AEEC 2002), 29 CFR 1910.120/1926.65, "Hazardous Waste Operations and Emergency Response," USACE Safety and Health Requirements Manual (EM 385-1-1), National Institute of Occupational Safety and Health (NIOSH)/ Occupational Safety and Health Agency (OSHA)/U.S. Coast Guard/Environmental Protection Agency (EPA) Occupational Safety and Health Guidance Manual for Hazardous Waste Activities, and USACE Safety and Occupational Health Document Requirements for Hazardous, Toxic, and Radioactive Waste (ER 385-1-92).

All fieldwork was performed in accordance with the requirements and controls established in the SSHP. Prior to the start of the remediation work, an excavation competent site supervisor ensured that the laundry effluent pond met OSHA requirements for safe personnel entry. Due to the depth, steepness, and unconsolidated soil type at the laundry effluent, some effort was required to contour the pond sidewalls to a slope of less than 1.5:1 (34-degree angle). In addition, it was necessary to construct a bench along one side of the excavation area to provide equipment access to the pond bottom.

The SSHP also specified protective measures to control potential exposure to airborne contaminants as a result of the high concentrations of lead and arsenic in the waste pile soils. All personnel working inside of the waste pile contamination reduction zones wore air-purifying (high-efficiency particulate air) respirators during excavation and loading activities. All respirator users were trained, medically qualified, and quantitatively fit-tested for respirator use prior to the start of fieldwork.

In addition to personal protective measures, the field team used a Miniram® real-time aerosol monitor and high volumes of water spray to continually monitor and control dust levels. An airborne particulate action level of 1.07 mg/m^3 , which is below the concentration that can be detected visually, was established in the SSHP to help evaluate the effectiveness of the dust control measures. At the outset of earthwork, dust levels measured in the equipment cab with open windows exhibited transient peaks as high as 1.98 mg/m^3 for periods less than 10 seconds. The soil was so dry and fine-grained that attempts to pre-soak the sites and continuous use of water spray during digging operations proved to be ineffective. Therefore, the dust control technique was modified so that before any soil was removed from a site, the excavator operator would slowly mix the soil and water in place within the excavation area to thoroughly dampen the soil prior to handling. This technique considerably reduced dust levels associated with digging and dumping actions. Miniram® readings at the Waste Pile 2 exclusion zone boundary ranged from 0.0 to 0.3 mg/m^3 after mixing. Readings near waste transport trucks during loading were 0.1 to 0.3 mg/m^3 .

Personal breathing zone sampling for lead and arsenic was also performed in accordance with NIOSH Method 7400. One equipment operator was monitored for one full period (8 hours). Results of the air sampling ($0.8 \text{ } \mu\text{g/m}^3$ calculated time weighted average for lead and non-detect for arsenic) indicated that lead and arsenic concentrations in the breathing zone were significantly below American Conference of Governmental Industrial Hygienists and OSHA action limits. These data support the conclusion that even with extremely dry and fine-grained soil types, North Wind's monitoring techniques and engineering controls are adequate to ensure compliance with the regulatory action limits.

4.2.2 Site Security

Security controls were established at the site as required for hazardous waste operations. The various work zones were set up prior to the start of excavation according to the requirements in the SSHP. Barriers were set around the perimeter of the work areas utilizing steel t-posts, construction barrier rope, and postings to prevent unintentional entry by unauthorized personnel. A parking/support zone was established near the excavation sites. An exclusion zone was established around each excavation area, while a secondary contamination reduction zone was established around each exclusion zone. The contamination reduction zones also encompassed the traffic lanes for the heavy equipment to minimize personnel in the construction area. In accordance with TEAD procedures, all vehicles, equipment, and tool trailers were locked when not in use. TEAD provided temporary security passes for every member of the field team, including truck drivers, surveyors, and other support personnel. TEAD security officers also routinely inspected vehicles entering and exiting the ammunition storage area.

4.2.3 Decontamination Procedures

Because all excavation areas were less than 40 ft wide, it was possible to conduct each excavation without driving the equipment into the exclusion zones. Keeping the tracks/tires of the equipment outside of the contaminated areas minimized the potential spread of contamination. At the end of the excavation work, and between excavations at the effluent ponds and waste pile areas, the excavator and front end loader buckets were cleaned by hand over polyethylene sheeting using low pressure water sprayers, shovels, wire brushes, putty knives, and disposable wipes. All debris was rolled up in the polyethylene sheeting and added to the last bulk soil load at the end of the day. No free liquid wastes were generated. The waste transport trucks were lined with polyethylene sheeting to minimize contamination of the truck beds and were washed out as necessary at the disposal facility.

4.2.4 Field Documentation

Detailed notes of the fieldwork were recorded in a dedicated project field book. The logbook included a brief description of activities undertaken at the site, including the time and date undertaken, visitors, and names of contractor personnel at the site. Sampling information was also recorded in the logbook. The sample identifier, date and time of each sample collected, sample custody information, and site diagrams were recorded. An extensive photographic record was also kept. The photographs included pre-construction conditions, excavation procedures, the excavation at its maximum depth, and the restored sites. A copy of the project field logbook is provided in Appendix B. Project photographs are provided in Appendix C.

4.2.5 Soil Removal and Loading

Excavation activities at SWMU 11 were conducted over a 2-week period in the fall of 2003. An experienced crew, with current OSHA HAZWOPER qualifications, mobilized to the site on October 13, 2003 and commenced site preparations, removing fencing and sloping the sidewalls around the laundry effluent pond, establishing work control zones, staging equipment, and conducting preparatory inspections. A kickoff meeting was held on October 13, 2003 with TEAD, USACE, and North Wind representatives to discuss the planned activities and to establish common expectations for a successful project. Prior to the start of fieldwork, all required site-specific training was completed and all field team members were briefed on the scope and requirements of each work activity. In addition, a safety briefing was held at the start of each day to allow field team members an opportunity to discuss the planned activities, associated hazards, and make suggestions to improve the overall work processes.

The SMWU 11 laundry effluent and sewage pond excavations presented several challenges. First, as discussed in Section 4.2.1, the laundry effluent sidewalls were too steep to allow for personnel entry. Second, waste transport trucks could not park near the excavation area due to the soft ground conditions and inaccessibility of the pond bottoms. Finally, the USACE required that a minimum volume of waste material be excavated, essentially skimming a uniform layer of soil from each excavation area. These constraints were addressed by the following procedures.

The first phase of the earthwork consisted of sloping the laundry effluent pond sidewalls. All four sides were pulled back to maintain at least a 1.5:1 (34-degree) slope. A ramp was constructed at the southwestern corner of the pond to provide equipment access to the excavation area located in the pond center. The second phase of the earthwork consisted of the removal of the contaminated soil. As specified in the RAP (AEEC 2002), the USACE had previously staked out rectangular areas ranging from 15 × 15 ft to 40 × 50 ft. Following the USACE corner stakes, North Wind painted excavation boundaries on the ground to guide the equipment operators. Initial ground surface elevations within each excavation area were also measured using a laser level. These measurements were referred to throughout the excavation to control the depth of the excavation. Using a painted 2-ft mark on the excavator bucket as a reference, the operator skimmed a fairly uniform 2-ft layer of soil from each of the excavation areas (with the exception of the sewage pond which required a 1-ft deep excavation). A second operator maneuvered a 5.5-yd³ front loader so that the loader bucket was suspended over the contaminated area within the reach of the excavator. The excavator transferred the contaminated soil into the loader bucket (approximately four excavator buckets to each 5.5-yd³ loader bucket) and any spilled soil fell back into the contaminated excavation area. At no time did either piece of machinery drive into the exclusion zones. The loader then shuttled the soil to waiting waste transport trucks. Six-mil high-density polyethylene (HDPE) sheeting was spread on the ground adjacent to the waste transport trucks to catch any inadvertent spills during loading.

Using this technique, with extensive precautions for dust generation and spill prevention, the contaminated soil was removed from the five excavation areas over a 5-day period. A total of 23 end dump trucks (22 to 30 yd³) and 14 roll-off bins (20-yd³ steel containers) were filled to weight capacity during the excavation activities. Results of the initial round of confirmation samples indicated that residual contamination levels in all five areas fell below their respective CAOs and no further excavation was necessary. A brief description of the excavation at each site is provided below:

- Excavation activities at the laundry effluent pond commenced on October 14, 2003. The 18 × 18-ft wide area was excavated to 2 ft in depth on that day. Approximately 24 yd³ of material was loaded into two trucks.
- Excavation activities at Waste Pile 3 were conducted on October 14 and 15, 2003. An area 30 × 45 ft was removed to 2 ft below ground surface (bgs) (approximately 100 yd³ of soil). Five 20-yd³ roll-off bins and one end dump truck were filled.
- Waste Pile 2 was excavated on October 15 and 16, 2003. An area measuring 50 × 42 ft was excavated to a depth of 2 ft bgs (approximately 156 yd³ of soil). Waste Pile 2 soils contained some small debris including wood fragments, scrap metal, concrete, and broken glass. A total of eight end dump trucks and two 20-yd³ roll-off bins were filled.
- The Waste Pile 1 excavation took place on October 16 and 17, 2003 and October 20, 2003. An area 70 × 30 ft was excavated to a depth of 2 ft bgs (approximately 156 yd³ of soil). Seven 20-yd³ roll-off bins and five end dumps were filled.
- The sewage pond excavation was conducted on October 20, 2003. An area 60 × 32 ft in the bottom center of the sewage pond was excavated to a depth of 1 ft bgs (approximately 71 yd³ of soil). Five end dump trucks were filled.

A Utah licensed surveyor recorded the final excavation boundaries and sample locations on October 22, 2003. The surveyor used a Topcon GTS-4 total station and reported data in North American Datum (NAD) 1983, Utah State Plane Projection, Central Zone. The surveyor utilized USACE provided control points (rebar stakes) at the nearby SWMU 25 site to tie in the SWMU 11 coordinates. The surveyor's report is included in Appendix D. Figures 2 and 3 illustrate the dimensions of the excavations, as recorded by a licensed surveyor.

4.3 Confirmatory Sampling

This section describes the procedures and results of confirmation sampling to determine residual levels of contamination after excavation.

4.3.1 Confirmatory Sampling Procedure

The sampling method specified in the RAP (AEEC 2002) is a systematic method whereby the bottom and sidewalls of each excavation area are divided into cells and one grab sample is collected from each cell. Table 2 summarizes the specified number of samples and required analyses for each excavation area. Figures 2 and 3 illustrate the sample locations and provide coordinates for each sample collected, as recorded by a licensed surveyor.

Table 2. Required samples and analytes for each excavation area.

	Bottom Samples	Sidewall Samples	Metals (Method 6010B)	Semivolatile Organics (Method 8270C)
Waste Pile 1	2	6	arsenic and lead	
Waste Pile 2	2	6	arsenic and lead	
Waste Pile 3	1	4	arsenic and lead	
Sewage Pond	2	6		benz(a)anthracene and benzo(b)fluoranthene
Laundry Pond	1	6 ^a		bis(2-Ethylhexyl)phthalate

a. USACE requested two additional sidewall samples near the original location of the Laundry Pond outfall pipe, for a total of six confirmation samples at the laundry effluent pond.

The soil samples were collected using approved TEAD *Chemical Data Quality Management Plan* (CDQMP) standard operating procedures (USACE 1999). Pre-cleaned sample jars provided by Mountain States Analytical, Inc. (MSAI) were labeled according to the sampling plan. “Forms II Lite,” developed by Dyncorp for EPA, was used to generate sample labels and chain of custody forms. The sample locations were laid out with a measuring tape and marked with wooden stakes, which were also labeled with sample location identifiers. The sampler used decontaminated stainless steel spoons to collect each sample. New gloves and decontaminated spoons were used with each sample to prevent potential cross-contamination. Before mobilizing to the site, the sampler had washed all non-disposable equipment with alconox and distilled water and packaged them in aluminum foil or zip lock bags with custody seals to ensure they didn’t become contaminated during transport. No field decontamination of sampling equipment was necessary.

Split samples were collected by placing approximately 30 mL of soil into a disposable aluminum pan, homogenizing the sample by hand using a stainless steel spoon, and then filling each sample jar with a few grams at a time from the homogenized batch of soil. An equipment blank was also collected by rinsing all of the decontaminated sample spoons and the aluminum mixing pan with high purity water and collecting the rinsate in a 500-ml HDPE container.

All required sample information was recorded on sample labels, in the logbook, and on chain of custody forms, as specified in applicable TEAD CDQMP standard operating procedures (SOPs 1.1, 1.2, 2.1; USACE 1999). Sample labels were covered with clear tape to prevent smearing. Neither chemical nor temperature preservation were required for the waste pile samples according to the Method 6010B, “Inductively Coupled Plasma-Atomic Emission Spectrometry” (EPA 1996a). The samples from the ponds were chilled using wet ice, as required by Method 8270C, “Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry” (EPA 1996b). Temperature blanks were included with the pond samples to verify that sample preservation requirements were met. Custody seals were affixed either to the sample container or to the sample cooler lid to prevent tampering. All samples were in the custody of the sampling team at all times until they were relinquished to the laboratory.

North Wind selected MSAI to analyze the confirmation samples. MSAI was certified by the State of Utah and validated by the USACE. Prior to the start of fieldwork, North Wind issued a scope of work and technical requirements to the laboratory and tentatively scheduled delivery dates for the SWMU 11 samples to ensure rapid turnaround. Severn-Trent Laboratories in Sacramento, California was identified by the USACE to analyze the quality assurance split samples.

4.3.2 Confirmatory Sample Results

Tables 3 through 5 provide the confirmation sample results for each excavation area. These tables provide the field sample identification number and the associated location identifier, as recorded in the USACE Automated Data Review system. The CAO for each analyte and the report method detection limit (MDL) are also included in the tables.

The laboratory analytical reports (report numbers 0310117, 0310129, 0310136) are provided in Appendix E. Quality control sample results are discussed in the Quality Control Summary Report (QCSR) in Appendix F. No quality issues were identified; these data are considered usable for the purpose of meeting project data quality objectives. That is, these data are adequate to determine whether contaminant concentrations remaining in the soils at SWMU 11 exceed CAOs.

The analytical results for all five sites indicated that residual concentrations for all contaminants were far below their respective CAOs. In fact, in the sewage pond, neither benz(a)anthracene nor benzo(b)fluoranthene were detected at concentrations above the MDL. At the laundry effluent pond, the highest concentration of bis(2-Ethylhexyl)phthalate, 2.5 mg/kg, was detected in a sidewall sample nearest the original location of the outfall pipe. This concentration was an order of magnitude below the CAO. Lead and arsenic concentrations in the waste pile confirmation samples were all significantly below the CAOs.

4.4 Hazardous Waste Determination and Disposal

During the planning phase of this project, North Wind developed a Hazardous Waste Determination (HWD) in accordance with the requirements of 40 Code of Federal Regulations (CFR) 262.11, “Hazardous Waste Determination” and Utah R315, “Environmental Quality, Solid and Hazardous Waste.” The HWD provides detailed documentation of the process that was followed to classify the generated waste and to determine proper management, transportation, and disposal practices (Appendix G). Representatives of the TEAD Environmental Office reviewed the HWD and approved the associated waste material profile sheet prior to the start of excavation activities. The waste material profile sheet included both the soil waste stream and secondary waste streams (i.e., used personal protective equipment and plastic sheeting) so that all waste material could be transported and disposed of together in bulk loads. The disposal company, Clean Harbors, also reviewed and approved the profile prior to the start of fieldwork.

Based on a description of generating processes and previous sampling results summarized in the RAP (AEEC 2002), there was no indication that any volatile organic compounds (i.e., trichloroethylene) were present at this site. The waste material from the SWMU 11 site was not known to contain any listed hazardous waste, as defined in 40 CFR 261 Subpart D, “Lists of Hazardous Waste.” Furthermore, there was no knowledge that Toxic Substances Control Act-regulated constituents were released to SWMU 11.

Table 3. Summary of SWMU 11 Laundry Pond confirmation sample results.

Excavation Area	Location ID	Field Sample ID	CAO (mg/kg) bis(2-Ethylhexyl)phthalate	Result (mg/kg) bis(2-Ethylhexyl)phthalate	MDL (mg/kg) bis(2-Ethylhexyl)phthalate
Laundry Pond	SWMU11-CS-01	S11LP-03-CNF-A1	78	0.116	.063
	SWMU11-CS-02	S11LP-03-CNF-A2	78	0.472	.0683
	SWMU11-CS-03	S11LP-03-CNF-A3	78	0.136	.0629
	SWMU11-CS-04	S11LP-03-CNF-A4	78	0.585	.0678
	SWMU11-CS-05	S11LP-03-CNF-A5	78	0.124	.0674
	SWMU11-CS-06 ^a	S11LP-03-CNF-A6	78	U	.0682
	SWMU11-CS-07 ^a	S11LP-03-CNF-A7	78	2.530	.322

a. Two additional sidewall samples near the original outfall pipe were requested by the USACE.

U = Non-detect as result is below MDL.

Table 4. Summary of SWMU 11 Sewage Pond confirmation sample results.

Excavation Area	Location ID	Field Sample ID	CAO (mg/kg) Benz(a)anthracene Benzo(b)fluoranthene	Results (mg/kg) Benz(a)anthracene Benzo(b)fluoranthene	MDL (mg/kg) Benz(a)anthracene Benzo(b)fluoranthene
Sewage Pond	SWMU11-CS-29	S11SP-03-CNF-A1	2.2	U	.0425
			2.2	U	.085
	SWMU11-CS-30	S11SP-03-CNF-A2	2.2	U	.0451
			2.2	U	.0903
	SWMU11-CS-31	S11SP-03-CNF-A3	2.2	U	.0443
			2.2	U	.0887
	SWMU11-CS-32	S11SP-03-CNF-A4	2.2	U	.0406
			2.2	U	.0813
	SWMU11-CS-33	S11SP-03-CNF-A5	2.2	U	.0408
			2.2	U	.0816

Table 4. (continued).

Excavation Area	Location ID	Field Sample ID	CAO (mg/kg)	Results (mg/kg)	MDL (mg/kg)
			Benz(a)anthracene Benzo(b)fluoranthene	Benz(a)anthracene Benzo(b)fluoranthene	Benz(a)anthracene Benzo(b)fluoranthene
	SWMU11-CS-34	S11SP-03-CNF-A6	2.2	U	.0407
			2.2	U	.0814
	SWMU11-CS-35	S11SP-03-CNF-A7	2.2	U	.0414
			2.2	U	.0828
	SWMU11-CS-36	S11SP-03-CNF-A8	2.2	U	.0443
			2.2	U	88.7

U = Non-detect as result is below MDL

Table 5. Summary of SWMU 11 Waste Pile confirmation sample results.

Excavation Area	Location ID	Field Sample ID	CAO (mg/kg)	Results (mg/kg)	MDL (mg/kg)
			Lead Arsenic	Lead Arsenic	Lead Arsenic
Waste Pile 1	SWMU11-CS-21	S11WP1-03-CNF-A1	1,800	2.88	.00154
			32	U	.00154
	SWMU11-CS-22	S11WP1-03-CNF-A2	1,800	3.06	.00169
			32	1.79	.00169
	SWMU11-CS-23	S11WP1-03-CNF-A3	1,800	2.75	.00176
			32	3.73	.00176
	SWMU11-CS-24	S11WP1-03-CNF-A4	1,800	2.84	.00152
			32	2.23	.00152
	SWMU11-CS-25	S11WP1-03-CNF-A5	1,800	2.51	.00151
			32	2.11	.00151
	SWMU11-CS-26	S11WP1-03-CNF-A6	1,800	3.24	.00157
			32	2.82	.00157

Table 5. (continued).

Excavation Area	Location ID	Field Sample ID	CAO (mg/kg)	Results (mg/kg)	MDL (mg/kg)
			Lead	Lead	Lead
			Arsenic	Arsenic	Arsenic
Waste Pile 2	SWMU11-CS-27	S11WP1-03-CNF-A7	1,800	3.65	.00162
			32	1.73	.00162
	SWMU11-CS-28	S11WP1-03-CNF-A8	1,800	2.72	.00151
			32	3.53	.00151
	SWMU11-CS-13	S11WP2-03-CNF-A1	1,800	2.41	.00157
			32	4.20	.00157
	SWMU11-CS-14	S11WP2-03-CNF-A2	1,800	28.0	.00157
			32	6.40	.00157
	SWMU11-CS-15	S11WP2-03-CNF-A3	1,800	2.57	.00161
			32	3.42	.00161
	SWMU11-CS-16	S11WP2-03-CNF-A4	1,800	7.12	.0017
			32	5.53	.0017
	SWMU11-CS-17	S11WP2-03-CNF-A5	1,800	2.74	.00152
			32	3.96	.00152
	SWMU11-CS-18	S11WP2-03-CNF-A6	1,800	10.3	.00159
			32	6.77	.00159
	SWMU11-CS-19	S11WP2-03-CNF-A7	1,800	2.30	.00157
			32	3.24	.00157
	SWMU11-CS-20	S11WP2-03-CNF-A8	1,800	2.24	.00153
			32	4.48	.00153

Table 5. (continued).

Excavation Area	Location ID	Field Sample ID	CAO (mg/kg)	Results (mg/kg)	MDL (mg/kg)
			Lead	Lead	Lead
			Arsenic	Arsenic	Arsenic
Waste Pile 3	SWMU11-CS-08	S11WP3-03-CNF-A1	1,800	3.31	.00155
			32	5.89	.00155
	SWMU11-CS-09	S11WP3-03-CNF-A2	1,800	3.18	.00154
			32	4.62	.00154
	SWMU11-CS-10	S11WP3-03-CNF-A3	1,800	3.97	.00153
			32	3.26	.00153
	SWMU11-CS-11	S11WP3-03-CNF-A4	1,800	2.53	.00152
			32	4.45	.00152
	SWMU11-CS-12	S11WP3-03-CNF-A5	1,800	3.11	.00155
			32	5.18	.00155
U = Non-detect, result is below MDL					

To evaluate the potential for toxicity, the sites were characterized for disposal purposes prior to the start of excavation. In August 2003, North Wind collected representative samples from the areas to be excavated. The sampling strategy selected by the USACE, in consultation with the Utah Department Of Environmental Quality, was to divide the excavation area into a number of grid blocks, each containing less than 85 yd³ of soil in place. Five-point composite samples were then collected from each grid block at multiple depths using hand augers. Sample collection and compositing were performed according to SOP 3.0, "Surface and Shallow Subsurface Soil Sampling" and SOP 3.2, "Composite Sample Preparation" from the TEAD CDQMP (USACE 1999). The soil characterization samples were submitted for analysis by EPA Method 1311, "Toxicity Characteristic Leaching Procedure" (EPA 1996c) and EPA Method 6010B, "Inductively Coupled Plasma-Atomic Emission Spectrometry" (EPA 1996a). The resulting analytical results from each sample represented the average leachable concentration of metal contaminants within a given grid block. To determine whether the waste would contain a characteristic hazardous waste, the results were compared to the Subpart C toxicity characteristic values in 40 CFR 261, "Characteristics of Hazardous Waste." It was concluded that waste to be removed from the SWMU 11 excavation areas would not carry any characteristic waste codes (i.e., the soil would be non-regulated).

A total of 864 tons of waste soil was profiled, transported, and disposed of as non-regulated waste at the Clean Harbors Grassy Mountain, Utah facility. Copies of the manifests, profiles, and disposal certificates are included in Appendix G.

4.5 Site Restoration Activities

After concurrence with the USACE and TEAD that the project objectives had been met, North Wind graded each of the excavation areas to match local topography. The laundry pond and sewage pond excavation areas were also covered with erosion control biomats to comply with requirements of the RAP (AEEC 2002).

5. ATTAINMENT OF CORRECTIVE ACTION OBJECTIVES

The objective for the SMWU 11 remediation was to remove contaminated soil that could pose a potential risk to TEAD personnel, as discussed in Section 3.1. To achieve this objective, North Wind excavated and disposed of contaminated soil from specific areas within SWMU 11 as prescribed by the USACE. Confirmation samples were collected and analyzed to measure residual levels of contamination. The resulting analytical data were validated and determined to be of sufficient quality to meet the corrective action and data quality objectives of the SWMU 11 site.

6. QUALITY CONTROL MEASURES

The SWMU 11 remediation work was completed in accordance with plans and procedures for chemical sampling and analysis, safety and health precautions, soil removal, and waste disposal. During the preparatory phase of the project, North Wind personnel carefully analyzed the requirements for successful completion of the work. Key documents included the RAP (AEEC 2002), the TEAD CDQMP (USACE 1999), and the USACE Safety and Health Requirements Manual (EM 385-1-1). Specific requirements from these documents were incorporated into implementing plans such as the SSHP and the CQCP, as described in Section 4.1.

In addition to up front identification of requirements, North Wind prepared for the project by selecting qualified project personnel, conducting training as necessary, and fully briefing all members of the project on the scope, objectives, and requirements necessary for a successful project. A substantial amount of time was expended scheduling suppliers and services to ensure the necessary tools, equipment, and support would be available to complete the fieldwork as planned.

North Wind contracted an analytical laboratory that had been previously certified by the Utah Department of Environmental Quality and validated by the USACE to perform the analytical work in accordance with the CDQMP (USACE 1999). The North Wind project chemist interviewed laboratory representatives prior to start of the fieldwork to ensure that they understood all the requirements and were prepared to deliver the specified product. An independent data validator was also contracted by North Wind to review the analytical results and methods in accordance with “Contract Laboratory Program National Functional Guidelines for Inorganic Data Review” (EPA 2002), “Contract Laboratory Program National Functional Guidelines for Organic Data Review” (EPA 1999), and the TEAD CDQMP (USACE 1999). Analytical quality control, including the data validation report, is discussed further in the QCSR (Appendix F).

During the implementation phase, a dedicated field team leader (FTL) was on-site at all times and was responsible for directing the work to meet all quality requirements. The FTL inspected all aspects of the excavation, sampling, and waste transport activities to ensure the work was performed as required. The FTL also documented activities, measurements, and times in a detailed logbook and kept a photographic record of the work. Particular effort was made to accurately record the excavation dimensions and locations of the confirmatory samples. Sample locations were marked using pre-labeled wooden stakes driven into the ground. Finally, a Utah licensed surveyor recorded the excavation dimensions and sample locations and reported the data in a standard, controlled format. Sample locations and chemistry data were subsequently archived in the USACE Automated Data Review system. By applying the USACE quality control system to this remediation work, North Wind ensured that all federal, state, and project specific requirements were met and that the work was completed in a timely manner within the fixed price established by the USACE.

7. REFERENCES

- 29 CFR 1910.120, 2002, Title 29, "Labor," Part 1910, "Occupational Safety and Health Administration," Subpart H, "Hazardous Materials," Section 1910.120, "Hazardous Waste Operations and Emergency Response," *Code of Federal Regulations*, Office of the Federal Register.
- 29 CFR 1926.65, 2002, Title 29, "Labor," Part 1926, "Safety and Health Regulations for Construction," Subpart D, "Occupational Health and Environmental Controls," Section 1926.65, "Hazardous Waste Operations and Emergency Response," *Code of Federal Regulations*, Office of the Federal Register.
- 40 CFR 261, Subpart C, 2002, Title 40, "Protection of Environment," Part 261, "Identification and Listing of Hazardous Waste," Subpart C, "Characteristics of Hazardous Waste," *Code of Federal Regulations*, Office of the Federal Register.
- 40 CFR 261, Subpart D, 2002, Title 40, "Protection of Environment," Part 261, "Identification and Listing of Hazardous Waste," Subpart D, "Lists of Hazardous Waste," *Code of Federal Regulations*, Office of the Federal Register.
- 40 CFR 262.11, 2002, Title 40, "Protection of Environment," Part 262, "Standards Applicable to Generators of Hazardous Waste," Section 262.11, "Hazardous Waste Determination," *Code of Federal Regulations*, Office of the Federal Register.
- AEEC, 2002, *Final Remedial Action Plan, SWMU 11, Laundry Effluent Pond and Waste Pile Areas*, American Environmental and Engineering Consultants, L.C., (AEEC), December.
- Dames & Moore, 2000, "Final Planning Documents, Known Releases SWMUs, Corrective Measures Study Work Plan," Tooele Army Depot, Utah.
- Dames & Moore, 2001, "Final Known Releases SWMUs 3, 11, 25, and 30, Corrective Measures Study Report," Tooele Army Depot, Utah, December.
- EPA, 2002, "Contract Laboratory Program National Functional Guidelines for Inorganic Data Review," Final, U.S. Environmental Protection Agency, Office of Solid Waste, July 2002.
- EPA, 1999, "Contract Laboratory Program National Functional Guidelines for Organic Data Review," Final, U.S. Environmental Protection Agency, Office of Solid Waste, EPA540-R-99/008, October 1999.
- EPA, 1996a, "Inductively Coupled Plasma-Atomic Emission Spectrometry," EPA SW-846 Method 6010B, Revision 2, U.S. Environmental Protection Agency, Office of Solid Waste, December 1996.
- EPA, 1996b, "Semivolatile Organic Compounds By Gas Chromatography/Mass Spectrometry," EPA SW-846 Method 8270C, Revision 2, U.S. Environmental Protection Agency, Office of Solid Waste, December 1996.
- EPA, 1996c, "Toxicity Characteristic Leaching Procedure," EPA SW-864 Method 1311, Revision 2, U.S. Environmental Protection Agency, Office of Solid Waste, December 1996.

- NIOSH Publication No. 85-115, *Occupational Safety and Health Guidance Manual for Hazardous Waste Site Areas*, October 1985.
- Rust E&I, 1995, Final RCRA Facilities Investigation Report Phase II Study Known-Releases SWMUs, Tooele Army Depot – North Area, Tooele, Utah.
- TEAD, 2001, *Resource Conservation and Recovery Act (RCRA) Corrective Action Permit*, Tooele Army Depot, Utah.
- USACE, 1999, *Chemical Data Quality Management Plan*, Tooele Army Depot, Utah, SIOTE-CO-EO, Revision 2, United States Army Corps of Engineers, June 1999.
- USACE, Engineer Manual (EM) 385-1-1, *Safety and Health Requirements Manual*, United States Army Corps of Engineers, September 3, 1996.
- USACE, Engineer Regulation (ER) 385-1-92, *Safety and Occupational Health Requirements for Hazardous, Toxic, and Radioactive Waste (HTRW) Activities*, United States Army Corps of Engineers, September 1, 2001.
- Utah R315, Utah Administrative Code, Title 315, “Environmental Quality, Solid and Hazardous Waste,” January 2001.

Appendix A

Installation Permits

APPENDIX A
EXCAVATION PERMIT
(Proponent Agency is Installation Support Division)
(TEAD-R 420-16)

EXCAVATION REQUESTED BY Aran Armstrong PHONE 208-528-8718 x115
LOCATION OF EXCAVATION SWMU-11 fax: 208-528-8714
PURPOSE OF EXCAVATION corrective measures removal action

NAME OF DIRECTOR TO NOTIFY THAT EXCAVATION IS TAKING PLACE IN OR NEAR A
BUILDING OR FACILITY UNDER THEIR RESPONSIBILITY _____
DATE DIRECTOR WAS NOTIFIED _____

NOTIFICATION SHALL BE MADE 24 HOURS IN ADVANCE

BASED UPON DRAWINGS AVAILABLE AND PERSONAL KNOWLEDGE OF THE AREA FOR WHICH I
AM RESPONSIBLE, THE SITE IS FREE OF UNDERGROUND FACILITIES OR SYSTEMS EXCEPT
AS NOTED:

REALITY SPECIALIST-BLDG 501 Don Chaudhry 5/13/03
* FACILITIES SUPPORT DIVISION-Bldg 516 Thomas Kuehn 5/13/03
COMMUNICATIONS CONTRACTOR-Bldg 10 OK 5/13/03
COAXIAL CABLE MANAGER-Bldg 10 OK 5/13/03
ENVIRONMENTAL OFFICE-Bldg 8 Wm D. Smith 5-12-03
SAFETY OFFICE-Bldg 400 _____

BLUE STAKES Notification Required YES _____ NO X
Confirmation Number _____

(For excavations near natural gas lines call BLUE STAKES 2 days prior to the
excavation (801) 983-1555. This permit is not valid if yes is checked and
the confirmation number is missing.)

INSTALLATION SUPPORT DIV-Bldg 501 [Signature]

NOTE: THIS PERMIT IS TO BE COMPLETED AND ATTACHED TO THE WORK ORDER PRIOR TO
THE WORK ORDER BEING ISSUED.

AFTER HOUR EMERGENCIES? CALL 833-2304 or 833-2015

EXCAVATOR MUST HAVE A VALID PERMIT IN POSSESSION BEFORE/DURING EXCAVATION

SMATE Form 2782-R (Rev) Feb 02
(Previous edition obsolete)

* DRAIN Lines in Digging Area.

FOR TOM MADSEN

From Tooele Army
Depot

Appendix B

Field Logbook

"Rite in the Rain"
ALL-WEATHER WRITING PAPER



ALL-WEATHER
ENVIRONMENTAL FIELD BOOK

Name TOM MATZEN
NORTH WIND, INC
Address 545 SHOLF
IDAHO FALLS, ID 83405
Phone 208-557-7855
Project TOOLE ARMY DEPOT SWAMP
II SITE CORRECTIVE ACTION.

This book is printed on "Rite in the Rain" All-Weather Writing Paper - A unique paper created to shed water and enhance the written image. It is widely used throughout the world for recording critical field data in all kinds of weather. For best results, use a pencil or an all-weather pen.

Specifications for this book

Page Pattern		Cover Options	
Left Page	Right Page	Polybirds Cover	Fabricated Cover
Columnar	1/4" Grid	Item No. 550	Item No. 552

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[illegible][Reference Page Index](#)

147 Error codes, Hazardous classifications, Container types
148 Sampling guidelines (Liquids)
149 Sampling guidelines (Solids)
150 Approximate Volume of Water in Casing or Hole, Ground Water Monitoring Well
151 PVC Pipe casing tables
152 Sol. Classification
153 Sol. Classification
154 Conversion (Length, Weight, Volume, Temp., etc.)
155 Conversion (Concentrations, volume/flow or Time, Velocity, Area, etc.)
156 Maximum Concentration of Coliforms for the Toxicity Characteristic

Location TEAD SWMU 11 Date 19 AUG 03
Project / Client USACE - TOOELE
ARMY DEPOT

19 AUG 03

0700 LOAD UP IN T.F.
TO GO TO TEAD.

14:20 ARRIVE AT SWMU 11
LAUNDRY PONDS. WILL
COLLECT

~~THE INT~~ WE WILL COLLECT
THE FIRST SAMPLE IN THE
LAUNDRY EFFLUENT POND
THE FIRST SAMPLE WILL BE
A COMPOSITE SAMPLE INTEND
TO REPRESENT THE SOIL IN AN
AREA ABOUT 17 X 17 FT AND
2 FT DEEP.

THE SECOND SAMPLE WILL BE
A COMPOSITE SAMPLE COLLECT
FROM ABOUT 2.5 FT
DEPTH IN THE LAUNDRY
EFFLUENT POND.

[14:25] WENT OVER AND SIGNED
OFF ON SSHP - (ARRAN BRUNSTRONG)
AND TOM MATZKE

Location

THAD Swann-11

Date

19 AUG 03

3

Project / Client

500 COLLECT CHAIRLRY

EFFLUENT POND STRATA

'A' WASTE CH - (0-2 FT)

WASTE CHARACTERIZATION

SAMPLE IS A 5 POINT COMPOSITE
RANGING IN DEPTH FROM
SURFACE TO 1.5 FT.

SAMPLE # 12 SILLP-03-CHR-

Soil is REDDISH BROWN

A1-1

VY DRY

SAMPLE COLLECTED VIA HAND AUGER

1510 COLLECT SAMPLE #

~~SILLP-03-CHR-A1-1~~ TIA

SILLP-03-CHR-B1-1

FROM STRATA 'B' IN SWANN-11
LAUNDRY EFFLUENT POND. THIS
SAMPLE IS A 5 SPOT COMPOSITE
COLLECTED FROM A DEPTH OF
2.5 FT VIA HAND AUGERALL COMPOSITE SAMPLES WERE
COLLECTED BY PLACING THE 5
SUB SAMPLES IN (ABOUT 250 CC'S EACH)
IN AN ALUMINUM PAN (NEW) MIXING

Location SWMU-11 L.R. Pond Date 8/19/03

Project / Client: _____

THOROUGHLY WITH A CLEAN STAINLESS
STEEL SPOON, AND THEN FILLING THE
SAMPLE BOTTLE WITH THE MIXED SOIL.
SOIL IN STRATA B' IS TAN,
SANDY, SLIGHTLY MOIST.

Location

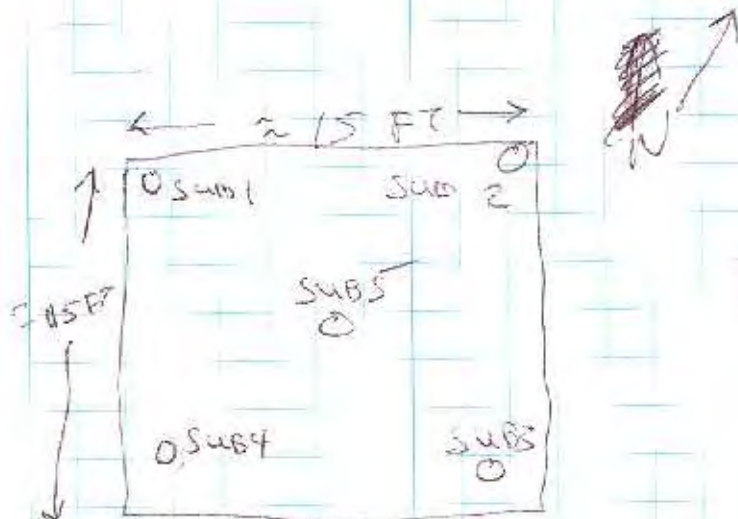
SWARC-11 L.A. POND

Date

8/19/05

5

Project / Client



SWARC-11 LA POND EFF. POND

Location ^{TEAM} SWIMMER II L.E. POND Date 8/19/03

Project / Client _____

1530 THE LAUNDRY SEWAGE POND IS
TO BE EXCAVATED ABOUT 30 KGA X 1
FT DEEP.

TWO COMPOSITE SAMPLES WILL BE
COLLECTED - 1 COMPOSITE FROM
~~1 TO 0 TO 1 FT DEPTH~~ (STRATA A), AND
1 COMPOSITE FROM 1-2 FT
DEPTH (STRATA B)

1545 COLLECT SAMPLE #
S/ISP-03-CHR-A1-1
SAMPLE IS A 5-POINT COMPOSITE
COLLECTED AT DEPTHS RANGING
FROM 0 TO 0.5 FT BGS
SOIL IS MOSTLY MINERAL WITH
A BIT OF ORGANIC MATTER
VERY DRY, SAND.

1550 COLLECT SAMPLE #
S/ISP-03-CHR-B1-1
AS A 5-POINT COMPOSITE
FROM A DEPTH OF 1.5 FT
VIA HAND AUGER. SOIL
IS SANDY, FINE SAND & FINE,

Location

TEAD SWMU 11

Date

8/18/03

Project / Client

LANDFILL SEWERBODY

MOSTLY MINERAL W/ TRACE
MOISTURE

WEATHER - CLEAR, 90°F WIND FROM
SOUTH

COMPOSITE SAMPLES COLLECTED
AS DISCUSSED ON PAGE 3-4

Location TEAD SURVEY - II LANDREY Date 8/19/03
SEWER POND
 Project / Client _____



Location

TREAD SWIM II
LAURENCE - 2000000000

Date

8/19
7/18/02

Project / Client

Location

TEAD Sump II
WASTE PILE AREA #1

Date

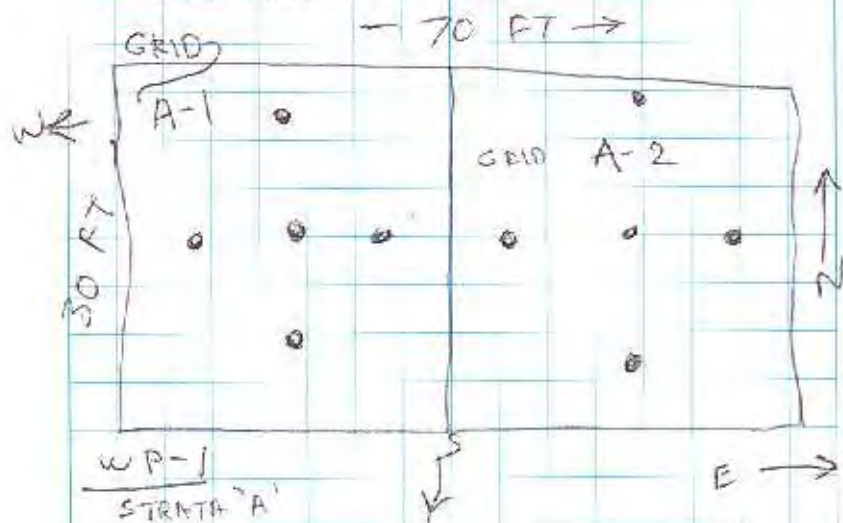
8/12/03

11

Project / Client

1630 - PULL OVER TO WASTE
PILE AREA #1. AND LOCATE
AND FLAG CORNERS AND CENTERS
OF ALL THREE WASTE PILES

1700 LAY OUT COMPOSITE SAMPLE
SCHEME IN WASTE PILE 1
SEE BELOW



DIVIDED WP-1 INTO TWO 30 X 35 FT
BLOCKS FOR STRATA A.

STRATA B WILL BE SAMPLED AS ONE
30 X 70 FT BLOCK AT 2.5 FT DEPTH

12 TEAD 3 W M U 11 WASTE PILE

Location

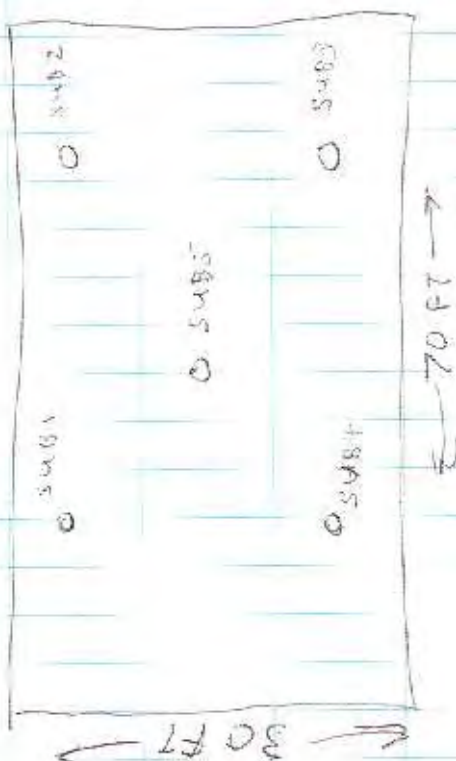
#1

Date

8/18/03

Project / Client

W.P. 1 STRATA 'B'

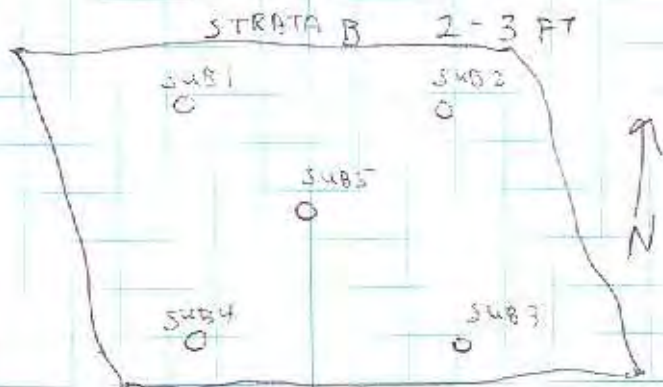


1715 LAY OUT
SCHEME E2

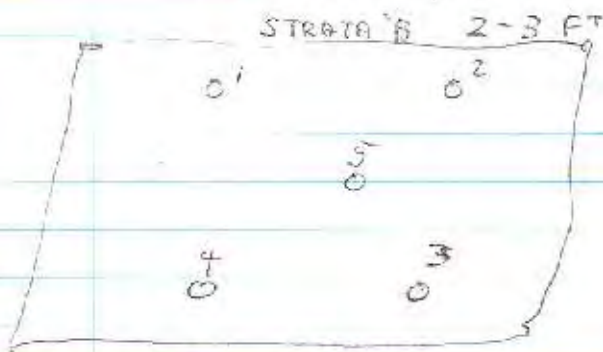
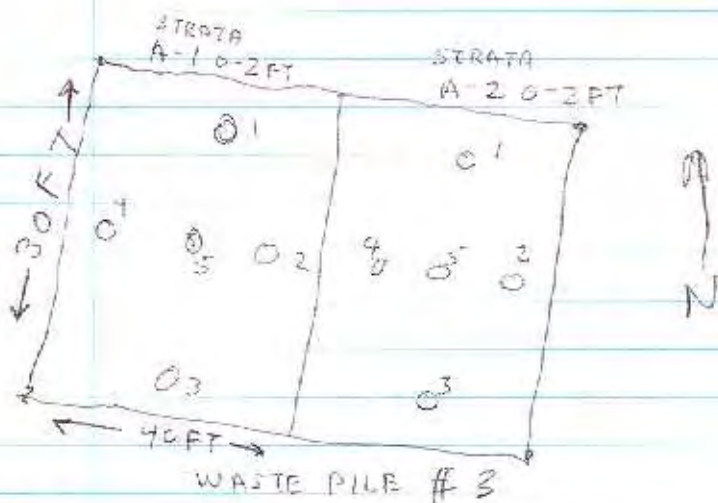
DIVIDED WASTE PILE E2 INTO 2 25X20 FT
BLOCKS AND COLLECTED A COMPOSITE SAMPLE FROM
EACH OF THE TWO BLOCKS



WASTE PILE # 2



1725 LAYOUT WASTE COMPOSITE SAMPLE
 SCHEME FOR WASTE PILE #3



Location TRAD SUMM 11
WASTE PILE #2
Project/Client _____

Date 8/12/03

15

1735 COLLECT SAMPLE #

S11 WP2-03-CHR-A1-1 FROM W.P. 2

COLLECT SAMPLE AS A 5-POINT

COMPOSITE - SUBSAMPLER DEPTHS

RANGING FROM 0-2 FT BOS

SOIL IS ATZ SAND, VY FINE AQUAN.

SMALL AMOUNT OF ORGANIC MATTER

IN TOP 2-3 IN THEN BECOMES

CLEAN SAND. VERT DRY TO

TRACE MOISTURE WITH INCREASED

DEPTH NO. DISCOLORATION. SEE DRAWING

ON P-13 FOR RELATIVE SUBSAMPLER LOCATIONS

1740 COLLECT SAMPLE #

S11 WP2-03-CHR-A2-1.

SAMPLE COLLECTED AS DESCRIBED ABOVE.

SOIL IS AS ABOVE. WEATHER IS

CLEAR, 90°F, WIND S-10 KT FROM

SOUTHWEST. COLLECTED FROM WP. #2

1755 COLLECT SAMPLE #

S11 WP2-03-CHR-B1-1. SAMPLE

COLLECTED AS A 5-POINT COMPOSITE

FROM 2-3 FT DEPTH IN WASTE PILE #2

SEE P13 FOR SUBSAMPLER POSITION DRAWING.

Location _____ Date _____

Project / Client

Project / Client

0750 COLLECT SAMPLE

S11WP1-03-CHR-A1-1 ASA
5-POINT COMPOSITE USING A
HAND AUGER. THE 5 SUB SAMPLES
WERE COLLECTED AT DEPTHS
RANGING FROM 0-2 FT.
SOIL IS A FINE QTZ SAND
W/ A SMALL AMOUNT OF ORGANIC
MATTER IN THE TOP 2-3 INCHES,
SOIL IS VERT DRY.

WEATHER IS PARTLY CLOUDY
WIND 10-15 FROM SOUTH. 85°F
A DRAWING OF THE 5 SUBSAMPLE
LOCATIONS IS PROVIDED ON
P/1. THE COMPOSITE SAMPLE
(AND ALL FOLLOWING COMPOSITE
SAMPLES) WERE COLLECTED AS
DESCRIBED ON P 3 AND 4.

0800 COLLECT SAMPLE

S11WP1-03-CHR-A2-1 ASA
5 POINT COMPOSITE USING A
HAND AUGER. THE 5 SUBSAMPLES
WERE COLLECTED AS D FROM 0-2 FT

Location TEAD SWMA II
WASTE PILE 1Date 8/20/03

Project/Client _____

BGS. SOIL IS AS DESCRIBED ABOVE.
SEE DRAWING ON P. 11

0810 COLLECT SAMPLE #
S11WP1-03-CHR-B1-1

AS A 5 POINT COMPOSITE. THE
5 SUBSAMPLES WERE COLLECTED

AT A DEPTH OF 2.5 FT. BGS.

SAN COMPOSITING WAS DONE AS
DESCRIBED ON PP 3 AND 4.

SEE DRAWING ON P. 12 FOR
RELATIVE LOCATIONS OF THE
~~5~~ 5 SUBSAMPLES

Location

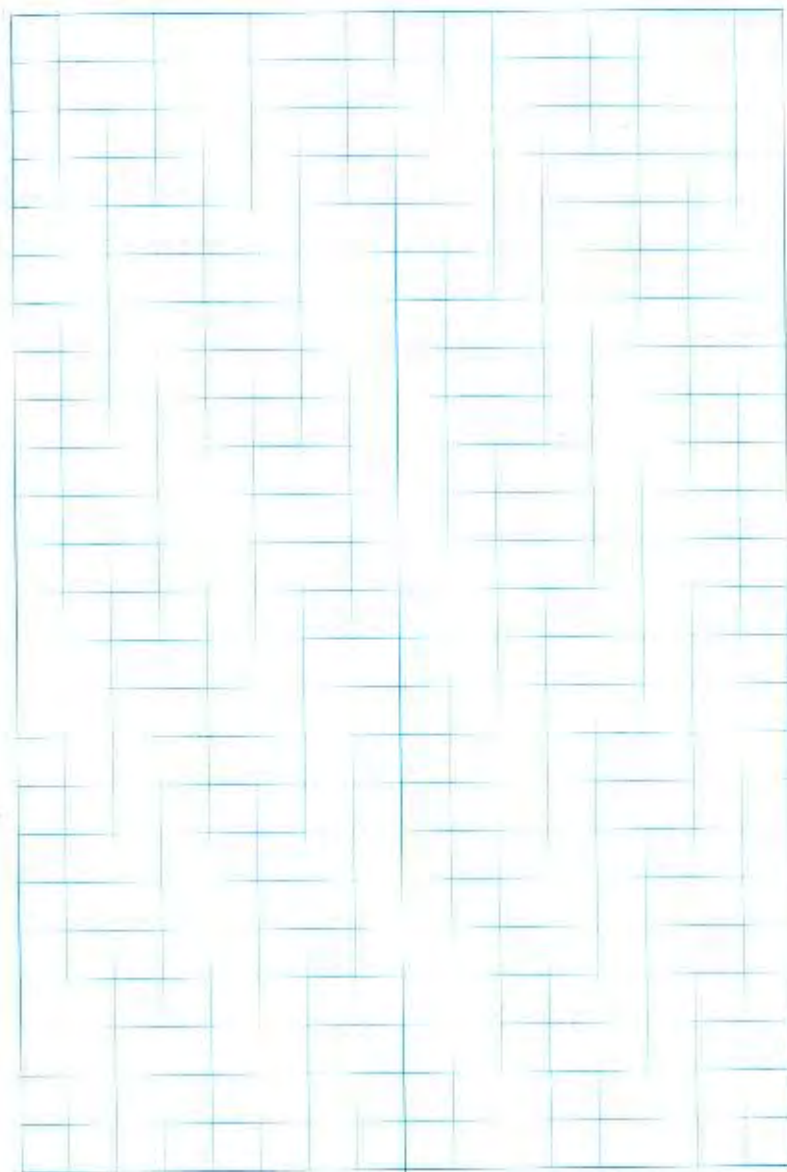
TEP D SUMU - II

WASTE PILE # 1

Date

8/20/03

Project / Client



0835 COLLECT SAMPLE #
S11 WP3-03-CHR-A1-1 AS
A 5-POINT COMPOSITE. THE 5
SUBSAMPLES WERE COLLECTED AT DEPTHS
RANGING FROM 0-2 FT BGS.
SEE DRAWING ON PAGE 14 FOR
RELATIVE POSITIONS OF THE 5 SUB
SAMPLES. SAMPLE WAS COMPOSITED
AS DESCRIBED PREVIOUSLY.

0845 COLLECT SAMPLE #
S11 WP3-03-CHR-A2-1 AS A
5-POINT COMPOSITE. THE 5
SUBSAMPLES RANGE IN DEPTH FROM
0-2 FT BGS. SEE DRAWING ON
P-14 FOR RELATIVE SUBSAMPLE
POSITIONS.

0855 COLLECT SAMPLE #
S11 WP3-03-CHR-B1-1 AS A 5-
POINT COMPOSITE. THE 5 SUBSAMPLES
WERE COLLECTED AT A DEPTH OF 2.5
FEET. SEE DRAWING ON P. 14

Location SWMU-11 Date 8/20/03²¹

Project/Client _____

WASTE PILES ARE WEST
OF BLDG 1270. THERE
IS A FIRE HYDRANT CLOSE
TO BLDG 1270

CONTRACTOR INSPECTOR IS
ROBERT REPPER

1035 LEAVING WASTE PILE
AREA OF SWMU-11.

1000 ARRIVE AT SUMMIT-11

AFTER COMPLETING HAZ
WASTE CLASS (TEAD)

SET UP TO DO RELATIVE
ELEVATION SURVEY PRE-EX
CAVATION OF WASTE PILE
#2

Location

TEAD SUMMIT

Date

9/3/03

23

Project / Client

USACE / TEAD

WASTE PILE # 2

BACKSHOT

5.98

FROM EAST END

00 + 10 CL 10

T20 TM 9/3/03

~~T30~~~~T40~~~~0~~

STARTING FROM EAST END

	CL	10 RT	10 LFT
00 + 10	3.95	4.22	3.81
+20	5.32	5.1	5.10
+30	5.56	5.64	5.50
+40	5.15	5.34	5.02

7/3/03

W P 2

EAST

RIGHT

Location TEAD CUMU-11 Date 8/3/03Project/Client USACE / TEAD

1110 SET UP TO DO PRE-EX
RELATIVE ELEVATION SURVEY
ON WASTE PILE 1.

WILL DO RELATIVE GROUND SURF
5 FT RIGHT AND 5 FT LEFT
OF CL

~~1130~~ FINISH AT OLD #1

Location TEAD SWMU-11 Date 9/3/03
WP-1
 Project / Client USACE / TEAD

25

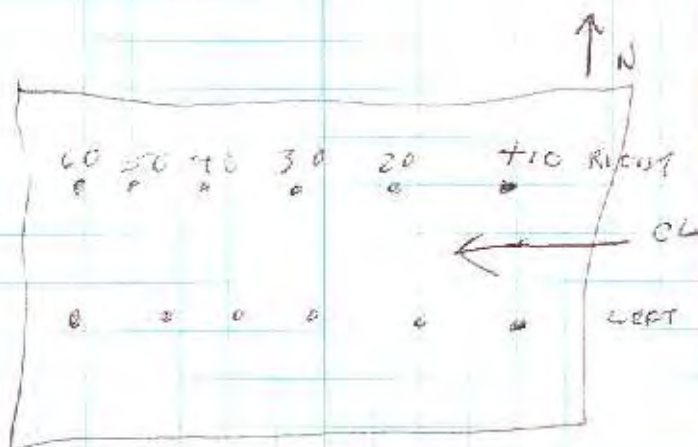
WP-1

BACKSHOT 5.98

FROM EAST END

10/20/03 5.75

FROM CL	5 FT RT	5 FT LEFT
00+10	6.58	6.54
+20	6.60	6.60
+30	6.59	6.54
+40	6.54	6.65
+50	6.75	7.06
+60	7.15	7.12



Location

TRAC SUMMIT-11

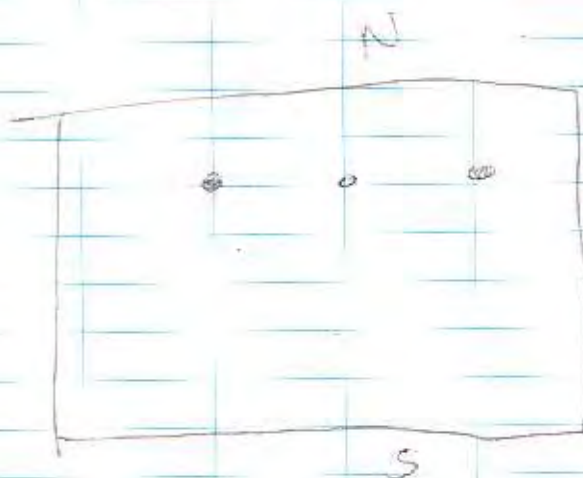
Date

7/3/03

Project / Client

LEACH

1140 SET UP ON WP #3



Location TEAM CANNON-11 Date 9/3/03 ²⁷Project / Client CSACE

WIP # 3

BACKSHOT = 8.48

FROM EAST END OF DIG AREA

FROM C.L.	SET RT	SET LEFT
00+10	4.98	4.62
720	4.83	4.80
730	4.38	4.24

10/15/03

BACKSHOT = 8.25

LIFE = -0.23

	SET RT	SET LEFT
00+10	6.75	6.62
00+20	6.60	6.80
00+30	6.15	6.24

1430 SET UP AT LAUNDY
SEWER POND TO OBTAIN
PRE-EX RELATIVE G.L.

Location TEAD SWMU-11Date 9/3/03

29

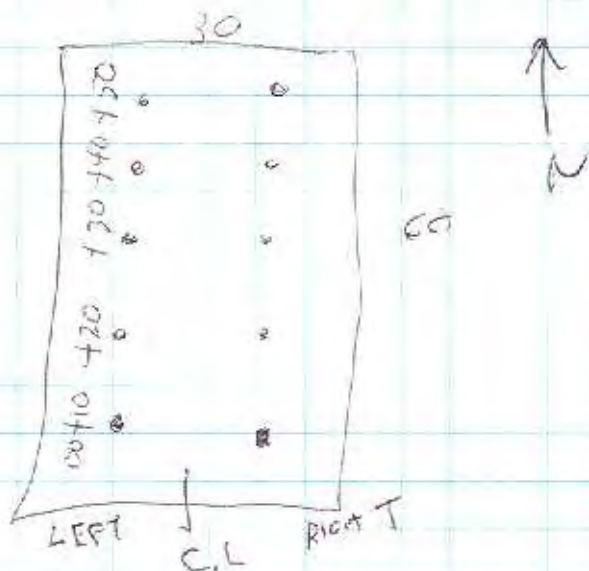
Project / Client LESACE

LAUNDRY SEWER POND

BACKSHOT = 5.24

STARTING AT SOUTH END

	5' RT OF CL	5' LT OF CL
00 + 10	5.47	5.40
+ 20	5.36	5.32
+ 30	5.30	5.10
+ 40	5.45	5.46
+ 50	5.58	5.50



Location TEAD SUMU-11Date 9/3/03Project / Client USACE

1500 SET UP AT LAUNDRY
EFFLUENT POND AT SUMU-11
TO ESTABLISH RELATIVE PRE-EX
G.L.

Location

TEAD SUMU II

Date

9/3/03

31

Project / Client

USACE

LAUNDRY EFFLUENT POND

BACKSHOT = 3.84

10/14/03 = 4.70 + 0.86

CENTER OF EXCAVATION
AREA = 7.28

0.86

10/14

8.14

+ 2.00

10.14



Location TEAD SWMU II Date 10/13/03
Project/Client USACE

0700 LOAD UP EQUIPMENT AT
STORAGE UNIT AND HEAD
DOWN TO TEAD

1200 ARRIVE TOOELE,

1330 OUT TO TEAD START
SETTING UP EQUIPMENT
AND WORK AREAS.

1430 1 OLD POD MTG, HASP
TRAINING - DC EQUIPMENT
INSPECTIONS.

1545 SET UP WORK ARE
AROUND SMU SWMU II
LAUNDRY EFF POND.
A

1600 START CONTROLLING
SLOPES AND LOWERING
BERM AROUND LAUNDRY
EFF. POND.

1800 PLACE ABOUT 500 GALLONS

Location

TEAD SUMU-14

Date

10/13/09

33

Project / Client

USACE

OF WATER ON PIND AREA
FOR DUST SUPPRESSION.

SECURE ALL EQUIPMENT

1830 STOP FOR EVENING
LEAVE AMMO AREA

Location TEAD SWMU-11 Date 10/14/03
Project / Client USACE

0730 OUT TO AMMO AREA ON
TEAD. INSPECT EQUIPMENT
AND GET A LOAD OF WATER

0800 UP TO THE TEAD OFFICES
FOR KICK OFF MEETING. GO
OVER WORK SCHEDULE. DISCUSS
APPROACH. CARL COLE WILL
BE OUT AS USACE TECH REP
TO START WITH.
HAD SOME DISCUSSION RELATED
TO

1000 BACK DOWN TO AMMO
AREA AND SWMU-11 LAUNDRY
EFF POND

CARL COLE - USACE CHECKS
OUT AND APPROVES LOCATION
OF ALL AREA IN LAUNDRY
EFF POND.

1030 SET UP TRUCK LOADING
AREA WITH SOME PLASTIC
SHEETING TO CATCH ANY SPILLS

1100 FIRE UA EQUIPMENT AND
PREPARE TO BEGIN EXCAVATING
IN LAUNDRY EFF POND

1130 CARL COLE PLACES HCL
GPS UNIT OUT OVER
CENTER OF EXCAVATION AREA
WILL LET STABILIZE FOR
10 MINUTES. TRYING TO
MAKE SURE DIG AREA IS
IN CORRECT LOCATION

1355 CHECKING DIG MEASUREMENTS
HORIZONTAL IS ON TARGET
SIDES ARE 2 FT AS
REQUIRED. DEPTH AT
CENTER IS 2" SHALLOW

Location TEAD SWM#11 Date 10/14/03Project / Client USACE

1400 JUSTIN REMOVES
ABOUT 4' MORE FROM
CENTER OF EXCAVATION,

1415 FINISH UP EXCAVATION
AT LAUNDRY EFF. POND
WE ENDED UP FILLING UP
1 TRUCK FULL + ABOUT
1/2 FRONT LOADER BUCKET
IN A SECOND TRUCK.

1430 MO START MOVING
EQUIPMENT TO OVER
TO RUBBLE PILE #3
AND SETTING UP TO DIG

1550 START EXCAVATING AT
RUBBLE PILE #3

Location TEAD SWM 11Date 10/14/03

37

Project/Client USACE

1620 LOADING TRUCK # 2
AT W.P. 3 DIG SITE

1700 FINISH LOADING TRUCK
2. WE HAVE EXCAVATED
ABOUT $\frac{1}{4}$ OF W.P. # 3

1720 SECURE SITE FOR THE
DAY

~~James A. May~~ 10/14/03



Location TEAD SUMMIT Date 12/15/03Project / Client CSACE

700 ARRIVE WP #3
SET UP FOR WORK

0825 ~~BEG~~ CONTINUING EXCAV-
ATING AT WP #3

0640 FILL #1 ROLL-OFF
BOX.

0900 FILL #2 ROLL-OFF
BOX WAIT FOR
MORE TRUCKS AND R.O. BOXES

✓
1055 START LOADING 3RD
TRUCK

1200 FINISH LOADING 3RD
TRUCK

1210 START LOADING 3RD
ROLL OFF BOX

Location _____

Date _____

Project / Client _____

1340. 4TH AND 5TH ROLL-OFF
BOXES ARE LOADED

4TH TRUCK IS ARRIVED
AND WAITING TO BE FILLED

1415 MOVING WORK AREA
SO WE CAN EXCAVATE
WP # 2.

1430 CHECKED DEPTH OF
WP#3 ~~WP # 7~~ EXCAVATION USING
^{NEW} LASER LEVEL DEPTHS
OK.

NOTE ALL BINS AND
TRUCKS LOADED TO TACS
POINT HAVE BEEN
USUALLY INSPECTED FOR
CLEANLINES AND LINERS
ALL BINS AND TRUCKS HAVE
BEEN CLEAN AND LINED
W/PLASTIC.

TEAD
Location Small WP 2 Date 15 OCT 03
Project / Client USACE

1500 SETTING UP TO DIG
ON WP # 2. TRUCK #
4 IS FULL

1630 EXCAVATING AT
W.P. # 2.

1705 TRUCK # 5
ARRIVES. START FILLING
TRUCK # 5.

1730 TRUCK # 5 IS FULL

1745

1800 SECURE SITE FOR
THE DAY

FRANK J. [Signature]
15 OCT 03

Run Century 160123

0645 Arrived on site.

- POD - safety meeting
 - Fuelled equipment (Superior Construction)
 - Staged 12th truck for loading
- Calm, warm ~40°

TRUCK # 6 ARRIVES

0710 START FILLING TRUCK # 6.

0735 FINISH FILLING # 6
TRUCK FROM WP # 2
PULL # 7 TRUCK INTO
POSITION AND START
LOADING IT

0750 FINISH LOADING
TRUCK # 7.

Location TEAD SWIM-11 WP2 Date 16 OCT 03Project / Client USACE
WP #2

0800 PULL TRUCK # 8 INTO
LOADING AREA AND START LOADING
IT WP.

0815 FINISHING LOADING
TRUCK # 8

1035 TRUCK # 9 PULLS
INTO LOADING AREA

1100 FINISH LOADING TRUCK
9

1100 START LOADING BIN #
ROLL OFF BOX #6 WE LEFT
#6 ON THE TRUCK AND ARE
LOADING IT ON THE TRUCK

1120 BIN #6 IS FULL. DRIVER
IS UNLOADING BIN #7.
WE WILL BILL ROLL OFF BOX #7

Location TEAD SUMMITDate 16 OCT 03Project / Client USACEUP#2

WHILE IT IS SITTING ON THE
GROUND

1140 FINISH FILLING BIN#
7

1150 PULL TRUCK# 10 INTO
LOAD AREA.

1220 FINISH LOADING TRUCK
10

1245 MOVE TRUCK # 11
INTO LOAD AREA
AND START LOADING IT.

1310 FINISH LOADING TRUCK
11.

~~1345~~

1315 MOVE TRUCK # 12
INTO LOADING AREA
AND START LOADING IT

'335 - FINISH LOADING
TRUCK # 12

'340 MOVE TRUCK # 13
INTO LOAD AREA AND
START LOADING IT
STILL LOADING OUT OF
WP # 2 BUT ALMOST
FINISHED

1350 FINISH EXC AT WP 2
PREPARE TO START DIGGING
AT WP #1

14 minutes

+305

FINISH LOADING
TRUCK # 13

WP #1

MOVE BT ROLL OFF BOX #
8 INTO LOADING AREA
AND START LOADING IT
WITH SOIL FROM
WP #1

Location TEAD SUMU-11 Date 10/16/03Project / Client USACEWP #1

1420 FINISH LOADING ROLL-OFF
BOX #8

1440 NO TRUCKS OR ROLL-
OFF BOXES AVAILABLE RIGHT
NOW. JUSTIN IS EXCAVATING
IN WP #1 AND WE ARE
APPLYING WATER AS HE
STOCKPILES THE SOIL WITHIN
THE WASTE AREA.

1500 EEC CHECK DEPTH
OF WP #2 EXCAVATION
USING LASER LEVEL.
DEPTH CHECKS OUT AT
2 FT +.

1600 RESEEDING - APRIL FONTAINE
AND FRED STRICKLAND SAID
DO NOT RESEED SUMU 25 or 11.
ALSO ADD ABL CONF
SAMPLES IN LAUNDRY AND
NEAR INFLUENT PIPE.

Location ZEAD SCUMU// Date 10/16/07Project / Client USACE
WP #11640 START LOADING TRUCK
#14 FROM WP #11715 FINISH LOADING TRUCK
#14.

START LOADING BIN #9.

1730 FINISH LOADING BIN
#9.1725 START LOADING BIN
#10

1735 FINISH LOADING BIN #10

0700 Arrived on site
POD - load 6 bins, sample
labware equipment

MPE arrives w/ 2 new bins

STP INSPECT EQUIPMENT
AND WAIT UP.

0745 START LOADING BIN # 11.

0755 FINISH LOADING BIN # 11

0810 START LOADING BIN # 12

0815 FINISH LOADING BIN # 12

0830 LEFT VV W/ HELGE GABERT
RE: SAMPLING SCHEDULE.
HE IS OUT OF OFFICE TILL
MONDAY PER WOEY
RECEPTIONIST. WILL
SAMPLE EFFLUENT

Location TEAD Date 10-17-03Project/Client BUMMER 11 WASTE
WP #3

0930 POOD, WASTE PILES 2 & 3
CONT. TODAY AND REMAINING 2
SITES NEXT TUESDAY - LEFT
INFO ON HG VMA - OK

0930 CONTINUED MIXING/WETTING
WP #1. PRE WET SEWAGE
POND -
WAITING FOR MORE BINS

1025 START LOADING BIN #13

1035 FINISH LOADING BIN #13

1040 START LOADING BIN #14

1050 FINISH LOADING BIN #14
to 10/17/03

1100 MOVED EX TO LAUNDRY EFFLUENT
POND TO PREMIX WATER SOIL FOR
DUST CONTROL

1200 START COLLECTING
CONFIRMATION SAMPLES

Location SWMU-11 Date 10-17-03 ⁴⁹

Project/Client USACE SWMU-11

(SEE SAMPLING LOG STARTING ON
PAGE 110)

1400 FINISH SAMPLING. SECURE
SITE

1500 LEAVE TRAIL,

~~TM
10/17/03
G. M. B.~~

Location TRAD SWMU-11 Date 11/20/09
Project / Client SWMU-11 WSACE

0700 ARRIVE SWMU 11 W.P. #1
SITE. WARM UP EQUIPMENT
GET WATER IN WATER
TRAILER. READJUST WORK
AREA ROPES. LAY OUT
NEW PLASTIC SHEETING IN
LOADING AREA.

0710 M.F.E. ARRIVES AND STARTS
PICKING UP RE-LOADED ROLL-
OFF BOXES.

0720 1ST TRUCK OF THE DAY
ARRIVES AND BACKS INTO
LOADING AREA - PLASTIC
LINER IS INSTALLED IN TRUCK
THIS WILL BE THE 15TH TRUCK

0730 LARRY McFARLAND COMES
BY TO SIGN MANIFESTS

0755 START LOADING 15TH
TRUCK.

^{TA 10/19/03}
0810 ~~10~~ 16 FINISH LOADING
15 TH TRUCK.

0820 BACK 16 TH TRUCK
INTO LOAD AREA.

0840 FINISH LOADING 16 TH
TRUCK

0845 START LOADING
17 TH TRUCK

^{TA 10/19/03}
~~0810~~ 0810 FINISH LOADING 17 TH TRUCK

^{TA 10/20/03}
~~0815~~ 0815 ~~START LOADING~~

0825 START LOADING 18 TH
TRUCK

0950 FINISH LOADING 18 TH
TRUCK FINISH EXC. AT
WP #1.

1000 SETTING UP TO CHECK
DEPTHS OF WP #1

Location TEAD SWMU-11 Date 10/7/03Project / Client SWMU-11 ~~SWMU-11~~ SWMU-11

CONT

1000 USING LASER LEVEL.
LASER IS SET UP 0.25 FT
LOW TODAY

1020 ALL DEPTHS CHECK OUT
PIT IS ALL 2 FT IN
DEPTH. DECON EQUIPMENT.

1030 ARAN MENTIONED THAT
HE HAD CALLED HELGE
GABERT AT ABOUT 0900 TO
SEE IF HELGE WANTED
TO WITNESS ANY OF OUR
CONFIRMATION SAMPLING.
HELGE SAID THAT HE
WOULD NOT BE ABLE TO
GET OUT TO TEAD THIS
WEEK AND THAT WE SHOULD
GO AHEAD WITH OUR
SAMPLING.

Location TEAD SWMU-11Date 10/20/03Project / Client SWMU-11 USACE

1030 MOVING ALL EQUIP
MENT OVER TO LAUNDRY
SEWER POND.

1115 START LOADING
19TH TRUCK.

1145 FINISH LOADING 18TH TRUCK
AND MOVE 20TH TRUCK INTO
LOADING AREA.

1150 BEGIN LOADING 20TH TRUCK

1210 FINISH LOADING 20TH TRUCK
THIS IS THE 6TH TRUCK FOR
TODAY. WE WILL HAVE TO
WAIT FOR THE MORNING'S
TRUCKS TO GET BACK

1330 24 ONE OF THE EARLY TRUCKS
FROM TODAY HAS RETURNED FROM
GRASSY MOUNTAIN.

1400 START LOADING 21ST TRUCK
(7TH LOAD TODAY)

Location TEAD SWMU-11Date 10/20/03Project / Client SWMU-11USACE

1420 FINISH LOADING 21ST
TRUCK.

1425 22ND TRUCK FALLS INTO
LOADING AREA

1445 FINISH LOADING 22ND TRUCK

1500 START LOADING 23RD TRUCK

1530 FINISH LOADING 23RD TRUCK
LAUNDRY SEWER POND EXC.
IS COMPLETE.

1500 SECURE SITE FOR THE
DAY

Location TEAD SWMU-11 Date 10/21/03Project / Client SWMU-11 WJACE

0700

0720 DELIVER SAMPLES COLLECTED
YESTERDAY FROM WP 1 TO
MSA FOR Pb AND As
ANALYSIS.

1000 START SAMPLING
FOR LAUNDRY SEWERPONG
(SEE SAMPLE LOG ON P 110)

1415 FEDEX DROPOFF OF QA SAMPLES
FOR SEVERN-TRENT LABS

Location

SWNU-11

Date

10/22/03

Project / Client

SWNU-11

USACE

0830 ARRIVE SITE, POLICE
UP SITE, START TAKING
DOWN ROPED JUMPST
AREAS.

0930 SURVEYORS ARRIVE
AND BEGIN SURVEYING
EXCAVATION SITES,

1100 START RECONTOURING
EXCAVATIONS WE ARE NOT
KNOCKING DOWN THE SHARP
PROP OFFS - NO BACKFILL
IS REQUIRED FOR THIS JOB

1230 SURVEYORS FINISHED
UP AND LEFT.

1250 FINISH RECONTOURING
ALL EXCAVATIONS,

1330 START LAYING EROSION
CONTROL MATS IN THE
LAUNDRY SEWER POND AND
IN THE LAUNDRY EFFLUENT
POND.

1530 USED UP ALL OF OUR
EROSION CONTROL MATS
NEED ONE MORE ROCK,
SO ARAN AND I GO INTO
SALT LAKE TO PICK UP
ANOTHER MAT.

1750 ARRIVE BACK AT TOOL
WILL FINISH UP WITH EROSION
CONTROL MATS TOMORROW

Location TEAD SUMM-11 Date 10/23/07Project / Client SUMM-11 USACE

0820 ARRIVE AT THE SUMM-11
LAUNCHY EFF POND SITE.
START LAYING OUT LAST MAT.

0900 FINISH UP WITH EROSION CONTROL
MATS. CLEAN UP SITE

1030 LEAVE SITE.

Location TEAD SWMA-1) LEF Date 10/17/03Project / Client USACESAMPLING LOG

1210 START SAMPLING
AT LAUNDRY EFFLUENT
POND

1215 COLLECT SAMPLE #S
S11LP-03-CNF-A1 AND
S11LP-03-CNF-A9 (A9
IS THE STL QA DUP)
FROM CENTER OF EXCAVATION
SEE MAP ON P. 111.
THESE TWO SAMPLES WERE
COLLECTED AS A COMPOSITE
BY PLACING THE APPROPRIATE
AMOUNT OF MATERIAL IN AN
ALUMINUM PAN (NEW) AND MIXING
THOROUGHLY WITH A DECONNE
STAINLESS STEEL SPOON.
SAMPLES WERE IMMEDIATELY
PLACED ON ICE.

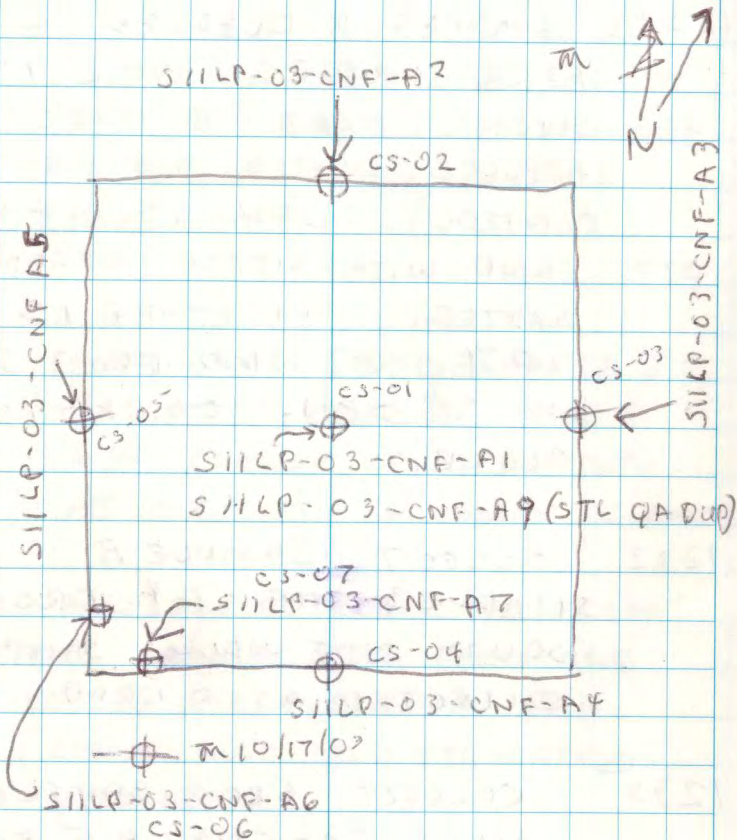
1224 COLLECT SAMPLE #S
S11LP-03-CNF-A2 AND
S11LP-03-CNF-A3, FROM
NORTH AND EAST SIDEWALLS RESPECTIVELY

Location TEAD SUMU-11 LEF Date 10/17/03

111

Project / Client USACE

SUMU-11 LAUNDRY EFFLUENT POND



1224 SAMPLES COLLECTED AS
GRAB SAMPLES. SOIL IS
SLIGHTLY MOIST (BECAUSE WE
APPLIED WATER FOR PAST
CONTROL). SOIL IS A FINE
PTZ SAND WITH LITTLE ORGANIC
MATTER. WEATHER IS
70°F W/ WIND FROM S
AT 0-5KN, CUSKY IS
CLEAR.

1232 COLLECT SAMPLE #
311LP-03-CNF-A4 FROM
SOUTH SIDE WALL. SAMPLE
COLLECTED AS A GRAB

1235 COLLECT GRAB SAMPLE #
311LP-03-CNF-A5 FROM
WEST WALL OF LAUNDRY
EFF. POND EXCAVATION

Location TEAD SWM4-11 LEP Date 10/17/03 113

Project / Client USACE

1237 COLLECT GRAB SAMPLE #
S11LP-03-CNF-AG FROM
SW CORNER OF EXCAVATION
AS DIRECTED BY USACE
(CARL COLE)

1241 COLLECT GRAB SAMPLE #
S11LP-03-CNF-~~A~~7 FROM
SW CORNER OF EXCAVATION
AS DIRECTED BY USACE C. COLE.

ALL SAMPLES COLLECTED FROM
THE LAUNDRY EFF. POND ARE
TO BE ANALYZED FOR PAHS
(SPECIFICALLY BIS 2 ETHYLHEXYL
PHTHALATE)

Location TEAD Date 10-17-03Project / Client SUMMITSAMPLING LOC WASTE PILE 31250 ~~ata~~

~~1300~~ SETUP FOR CONF SAMPLING
AT WASTE PILE #3.

1300

COLLECT SAMPLES A1 & A6

DON NEW GLOVES FOR EACH
SAMPLE. ALSO TYVEK BOOTIES
AND LEVEL D PPE.

PLACE SOIL INTO ~~AT~~ ~~ATA~~
NEW AL BAKING PAN
MIX THOROUGHLY WITH
SPOON (SS SPOON PREVIOUSLY
DECONN'D). PLACES SOIL
INTO TWO SAMPE BOTTLES
A FEW GRAMS AT A TIME
UNTIL BOTH ARE FILLED.
SAMPLE NOS:

1304

S11WP3-03-CNF-A1

1304

S11WP3-03-CNF-A6 (DUP
FOR STL)

SAMPLER: N. MANNER

ANALYSIS: TMET 6012B

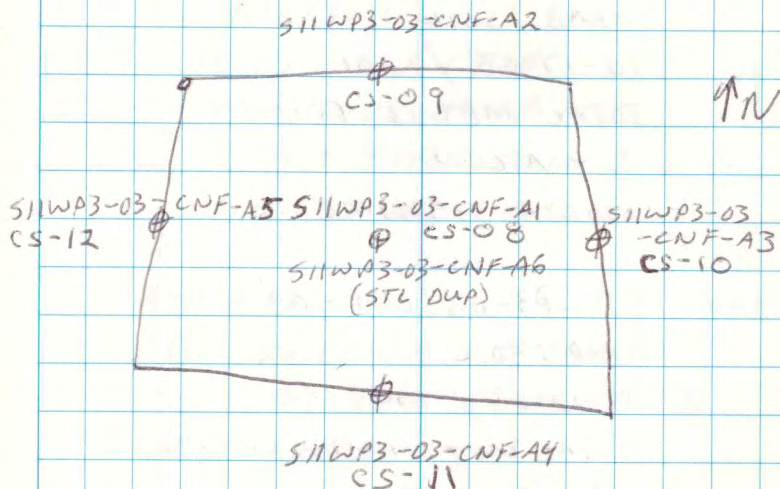
SAMPLE DATE/TIME: 17 OCT 03 / 1304

TYPE: GRAB MATRIX: SOIL

CENTER BOTTOM LOCATION

Location TEADDate 10-17-03 115Project / Client SWMU 11SAMPLING LOG WASTE PILES 3

WASTE PILES SWMU 11



SANDY SOIL, LITTLE ORG
MATTER, NO STAINING
NO ODOR

WASTE PILE 3 SAMPLE LOG

1301

1300^{area}

COLLECT SAMPLES (CONT.)

~~SAME PROCEDURE AS BEFORE~~ ^{area}

S11 WP3-03-CNF-A2

GRAB / SOIL

10-17-03 / 1301

TOTAL METALS 6010B

T. MATZEN

NORTH SIDEWALL

1304

S11 WP3-03-CNF-A3

GRAB / SOIL

10-17-03 / 1304

TOTAL MET 6010B

N. MAIMER

EAST SIDEWALL

1306

S11 WP3-03-CNF-A4

GRAB / SOIL

10-17-03 / 1306

TOTAL MET 6010B

N. MAIMER

SOUTH SIDEWALL

Location TEAD Date 10-15-03 117

Project / Client SWMM II

WASTE PILE 3 SAMPLE LOG

COLLECT SAMPLES (CONT.)

STEEP3 area

1308 SWMP3-03-CN1-45

GRAB/SOIL

10-17-03 / 1308

TOTAL MET 60103

N. MAIMER

WEST SIDEWALK

ATE area

ALL EQUIPMENT, (SS SPOONS
AL PANS) WERE PRECLEANED
OR UNUSED.

NITRILE GLOVES WERE
CHANGED BETWEEN EVERY
SAMPLE.

SAMPLE LOCATIONS WERE MARKED
WITH PRE-LABELED WOODEN
STAKES FOR LATER SURVEYING.

GRAB SAMPLES SPOONED INTO JARS

Location

TEAD

Date

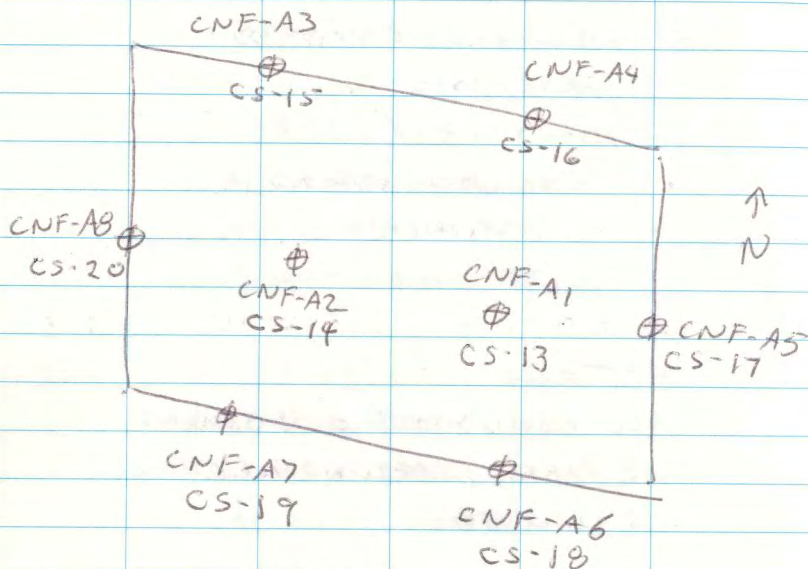
170LT03

Project / Client

Summit

WASTE PILE #2 SAMPLE LOG

CONFIRMATION SAMPLING



SILTY SAND, NO STAINING

NO ODOR, NO ORGANIC MATTER

Location TEAD Date 17 OCT 03Project / Client SWMCA IIWASTE PILE #2 SAMPLE COL

COLLECT SAMPLES

ALL SPOONS CLEANED WITH
ALLONOX / DI RINSE IN
SAMPLE TRAILER.NEW NITRILE GLOVES BETWEEN
EACH SAMPLE.

LEVEL D PPE W/ TYVOK BOOTIES

STAKED SAMPLE LOCATIONS
W/ PRE LABELED WOODEN
STAKES.SPOONED SOIL DIRECTLY INTO
JARS

Location

FEAD

Date

10-17-03

Project / Client

SUMMA II

USACE

WASTE PILE #2

SAMPLE LOG

COLLECT SAMPLES (CONT)

1330

SIW P 2-03-CNF-A1

GRAB SOIL

10/17/03 / 1330

TOTAL MET 6010 B

T. MATZEN

CENTER EAST BOTTOM

1334

SIW P 2-03-CNF-A2

GRAB SOIL

10/17/03 1334

TOTAL MET 6010 B

N. MAIMER

CENTER WEST BOTTOM

1335

SIW P 2-03-CNF-A3

GRAB SOIL

10/17/03 1335

TOTAL MET 6010 B

T. MATZEN

NORTH WEST SIDEWALL

Location

TEAD

Date

10-17-03

121

Project / Client

SUMMA II

USACE

WASTE PILE #2 SAMPE LOG

COLLECT SAMPLES (CONT)

1336 S11WP2-03-CNF-A4

GRAB SOIL

10/17/03 1336

TOTAL MET 6010B

N. MAIMER

NORTH EAST SIDEWALL

1338 S11WP2-03-CNF-A5

GRAB SOIL

10/17/03 1338

TOTAL MET 6010B

T. MATZEN

EAST SIDEWALL

1339 S11WP2-03-CNF-A6

GRAB SOIL

10/17/03 1339

TOTAL MET 6010B

N MAIMER

SOUTH EAST SIDEWALL

Location TEADDate 10-17-03Project / Client SWMU IIWASTE PILE #2 SAMPLE LOG

2

1340 S11WP-03-CNF-A7

GRAB SOIL

10/17/03 1340

TOTAL MET 6010B

T MATZEN

SOUTH SIDEWALL

1341 S11WP²-03-CNF-A8

GRAB SOIL

10/17/03 1341

TOTAL MET 6010B

N MATZEN

WEST SIDEWALL

~~Approved
10/17/03~~

Location

BEAD

Date

10-17-03

123

Project / Client

SWIN 11

SAMPLE LOG

ALL SAMPLE LABELS
COVERED WITH CLEAR TAPE.
~~CUSTODY SEALS ON EACH CUA~~
~~JAR.~~ ALL PACKAGED
WITH BUBBLE WRAP AND
PLACED IN ZIPLOCKS IN
SAME (SINGLE) COOLER
WITH ICE.
ICE IS DOUBLE BAGGED.

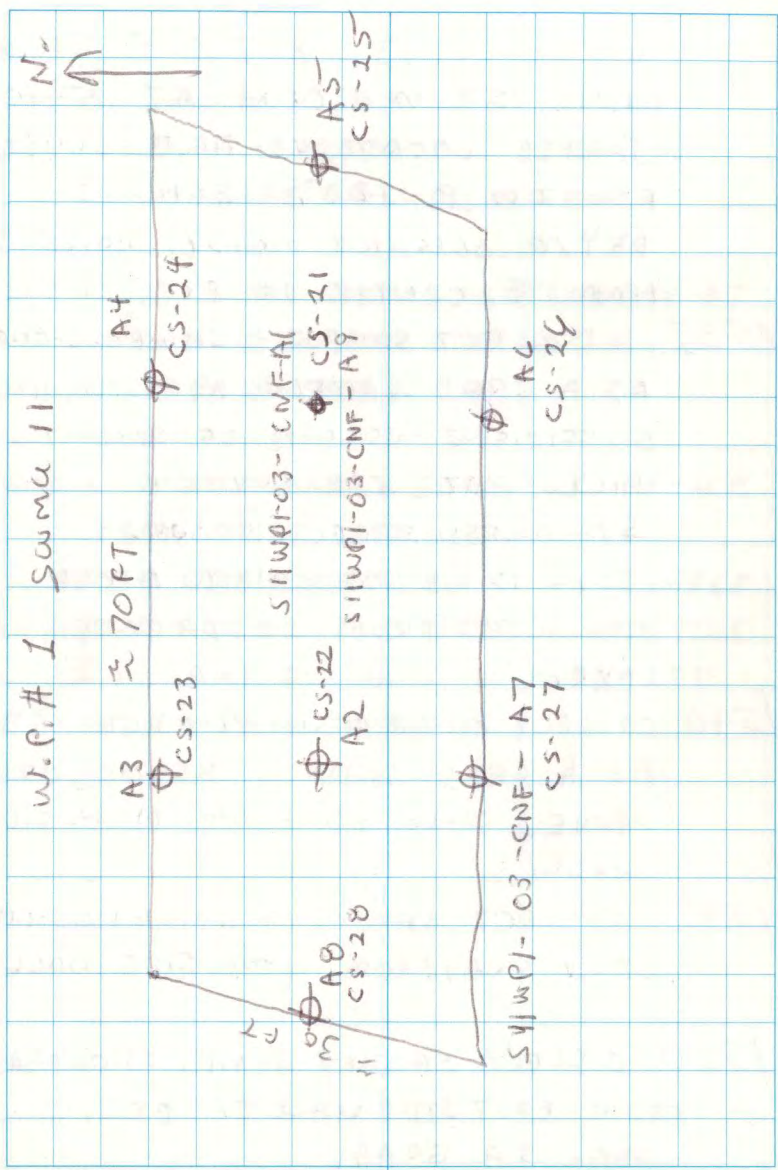
CUSTODY SEALS ON COOLER
INSTEAD OF JARS PER
USACE PAT CANTRELL.

FRANCO G. MATH
10/17/03

Location TEAD SWMU-11 Date 10/24/03Project / Client TEAD SWMU-11 USACEWASTE PILE #1

1400 COLLECT SAMPLE # S11WPI-03-CNF-A10
AS AN EQUIPMENT RINSATE. SAMPLE
WAS COLLECTED BY POURING HPLC
WATER INTO A NEW ALUMINUM
SAMPLING PAN CONTAINING THE
DECONNED STAINLESS STEEL SPOONS
THAT WILL BE USED TO COLLECT
THE GRAB SAMPLES (CONFIRMATION
SAMPLES) FROM W.P. #1.
THIS RINSATE SAMPLE WILL BE
ANALYSED FOR Pb AND As.

1524 COLLECT SAMPLE #S
S11WPI-03-CNF-A1 AND
S11WPI-03-CNF-A9. A9
IS THE QA DUP TO BE SENT
TO STL. THESE SAMPLES
WERE COLLECTED BY COMPOSITING
SUFFICIENT SOIL TO FILL BOTH
JARS AND COLLECTED SAMPLES
AS A SPLIT. SOIL IS A
FINE SILTY SAND, QTZ, WITH
LITTLE ORGANIC MATTER.



Location TEAD SWMU-11 Date 10/20/03Project / Client USACE

WEATHER IS 87°F WITH WIND FROM NW AT 5-10 KPH. SAMPLE LOCATIONS ARE ILLUSTRATED ON P 125. SOIL IS DRY TO SLIGHTLY MOIST, COLLECTED FROM E. CENTER OF EXC.

1537 COLLECT SAMPLE # S11WPI-03-CNF-A2 AS A GRAB SAMPLE, BY SPOONING SUFFICIENT VOLUME OF SOIL TO FILL 80Z JAR USING A CLEAN STAINLESS STEEL SPOON.

SOIL IS AS DESCRIBED ABOVE. COLLECTED FROM WEST CENTER OF EXC.

1540 COLLECT SAMPLE # S11WPI-03-CNF-A3 AS A GRAB SAMPLE AS DESCRIBED ABOVE. COLLECTED FROM N.W. SIDE WALL.

1545 COLLECT SAMPLE # S11WPI-03-CNF-A4 AS A GRAB FROM N.W. SIDE WALL.

1550 COLLECT SAMPLE # S11WPI-03-CNF-A5 FROM EAST SIDE WALL OF EXC. SAMPLE IS A GRAB.

1551 COLLECT SAMPLE #

SIIWPI-03-CNF-AC FROM

SE SIDE WALL AS A GRAB

1555 COLLECT SAMPLE # SIIWPI-03-CNF-A7

FROM SW SIDE WALL AS A

GRAB SAMPLE.

1559 COLLECT SAMPLE # SIIWPI-03-CNF-A8

FROM WEST SIDE WALL OF EXC

AS A GRAB SAMPLE. THIS SAMPLE

AND ALL OF THE ABOVE WASTE PILE

#1 SAMPLES WILL BE ANALYZED

FOR Pb AND Ac

1000 COLLECT SAMPLE # SIISP-03-CNF-A10
AS AN EQUIPMENT RINSE TO
BE ANALYSED FOR PAHs (8220C)
B(9)A AND B(9)F. SAMPLE WAS
COLLECTED BY POURING HPLC WATER
OVER THE DECONNED STAINLESS
STEEL SPOONS IN AN ALUMINUM PAN
AND THEM INTO TWO 1 LITER
A. G. BOTTLES.

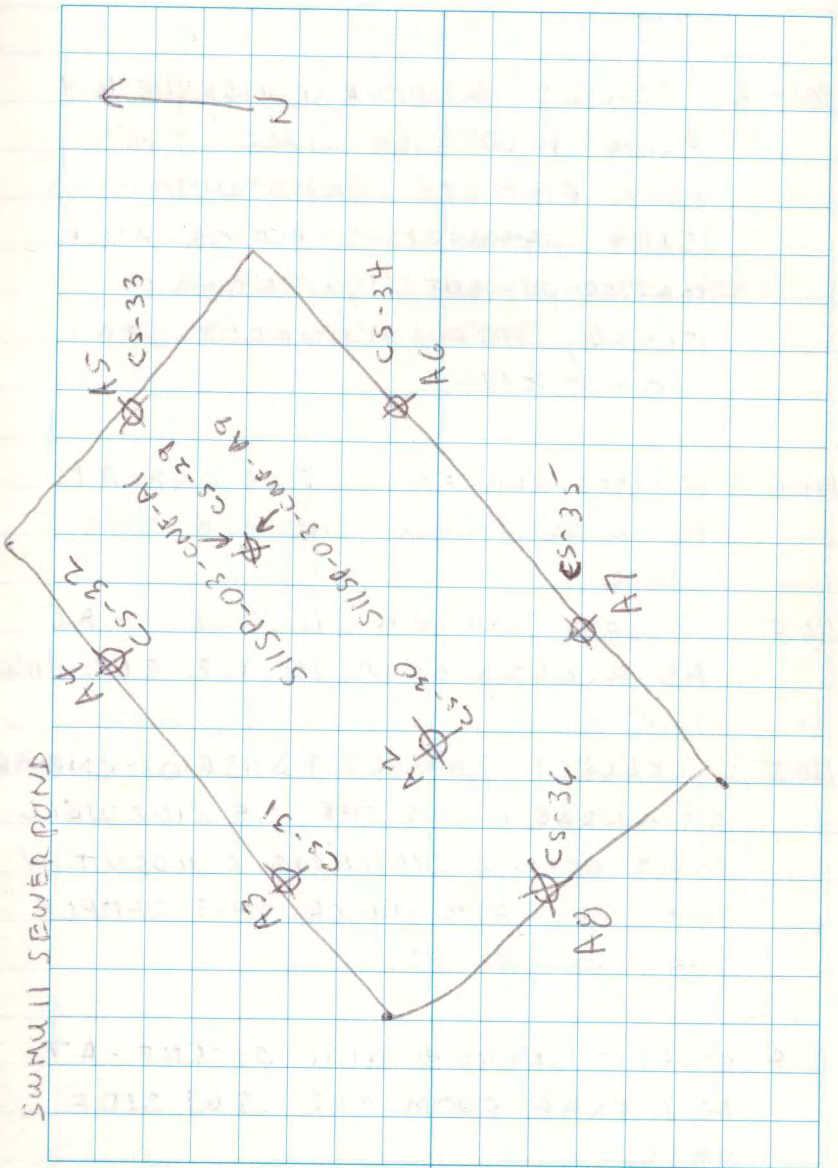
1053 COLLECT SAMPLE #s SIISP-03-CNF-A1
AND SIISP-03-CNF-A9. A1 IS
THE CNF SAMPLE AND A9 IS
THE QA DUP TO BE SENT TO
STL. THESE SAMPLES WERE
COMPOSITED IN AN ALUMINUM
PAN AND COLLECTED AS A
SPLIT. SAMPLES COLLECTED FROM
CENTER OF NE HALF.

105⁵₈ COLLECT SAMPLE # SIISP-03-CNF-A2
TH_{10/21/03} AS A GRAB FROM THE ~~SW~~ CENTER
OF THE SW HALF OF THE EXC.

Location SWMU-11 S.P.

Date 10/21/03

Project / Client SWMU-11 / USACE



Location SWMA-11 SEWER POND Date 10/21/03Project / Client SWMA-11 USACE

1058 COLLECT SAMPLE # S11SP-03-CNF-A3
FROM NW SIDE WALL. SOIL
IS A FINE PTZ SAND WITH SOME
SILT. ~~4~~ VERY LITTLE ORGANIC
MATTER PRESENT. WEATHER IS
CLEAR, 80°F, WIND FROM SEAT
O-5 KNOT.

1100 COLLECT SAMPLE # S11SP-03-CNF-A4
AS A GRAB FROM THE NE SIDE
WALL

1105 COLLECT SAMPLE # S11SP-03-CNF-A5
AS A GRAB FROM THE NE END WALL

1105 COLLECT SAMPLE # S11SP-03-CNF-A6
AS A GRAB FROM THE SE SIDE WALL
SOME REDDISH STAINING EVIDENT IN
THE SOIL FROM WHICH THIS SAMPLE
WAS COLLECTED.

1108 COLLECT SAMPLE # S11SP-03-CNF-A7
AS A GRAB FROM THE SW SIDE
WALL.

Location SWMA-11 LAUNDRY SEWER POND Date 10/21/03 131

Project / Client SWMA-11 / USACE

111 COLLECT SAMPLE# S11SP-03-CNF-AB
FROM THE SW END WALL AS A
GRAB SAMPLE.

ALL OF THESE SAMPLES ARE A
SILTY FINE QTZ SAND WITH VERY
MINOR ORGANIC MATTER.

Location TEAD SWMU 11 Date 10/14/03Project / Client USACEPHOTO LOG

- | | | |
|-----|------|--|
| #1 | 1115 | CARL COLE, TOM MATZEN, AND JUSTIN MORGAN VERIFYING SITE EXCAVATION SIZE, LOOKING TOWARD NORTHEAST. |
| #2 | 1255 | TOM MATZEN @ DUST CONTROL W/ JUSTIN OPERATING THE EXCAVATOR. LOOKING TOWARD THE EAST. |
| #3 | 1600 | STARTING EXCAVATION |
| #4 | | AT W.P. # 5 LOOKING |
| #5 | | SW |
| #6 | | |
| #7 | | |
| #8 | | |
| #9 | 1620 | DUST CONTROL AT |
| #10 | | W.P. # 3 |
| #11 | 1625 | SHUTTLEING SOIL FROM DIG AREA TO TRUCK LOOKING SOUTH |

12 1625 LOADING TRUCK #
2.

10/15/03

13 0800 PHOTO OF NE CORNER
STAKE WP #3

14 0800 PHOTO OF SE
CORNER STAKE OF WP #3

15 0800 PHOTO OF NW
CORNER STAKE OF WP #3

16 0800 PHOTO OF SW
CORNER STAKE WP #3

11 ⁰⁸³⁰ LOADING A ROLL-OFF
BOX AT WP # 3. LOOKING
NORTH

12 0845 A FILLED ROLL-OFF
13 BOX AT WP - 3

14 1200 A LINED ROLL-OFF
BOX AT WP #3

15 1345 ARAN DISTRIBUTING
LOAD IN R.O. BOX

16 1445 SHOT OF COMPLETED
W.P. #3 EXCAVATION LOOKING
WEST,

17 1725 EXCAVATING AT
WP #2 WATER IS

18 BEING APPLIED
FOR DUST CONTROL

19 LOOKING EAST AND
NORTH

20

21



22 0800 SHOT OF LINED
TRUCK BED, PARTIALLY
LOADED - LOOKING N
TOWARD FRONT OF TRUCK

23 0815 SHOT OF EXC
WORK AT WP 2
LOOKING EAST

24 1120 LOADING BIN # 6
LOOKING WEST

25 1400 STARTING EXC
AT WP # 1 LOOKING NE

26 AS ABOVE LOOKING
EAST WATER IS
BEING APPLIED FOR
DUST CONTROL

~~27 N~~

Location SWMU 11 W.P. #1 Date 10/20/03Project / Client FEAD SWMU 11 USACE

27

0810 LOADING TRUCK #15
LOOKING SOUTH

28

0950 - FINISH UP
DIG AT WP #1 AT
SWMU 11 LOOKING
N E

29

1020 JUSTIN CHECKING
BACK SHOT AT WP #1
LOOKING EAST.

30

1015 NEIL CHECKS DEPTH
OF WP #1 USING A
LASER LEVEL LOOKING
WEST

31

1130 EXCAVATING
AT THE LAUNDRY
SEWER POND LOOKING
EAST

Location SWMU 11 LAUNDRY SEWER 10/20/03 ¹⁴⁵

Project / Client USACE

32 1145 MOVING TRUCK # 20
INTO LOADING AREA FOR
LAUNDRY & SEWER POND
EXCAVATION. LOOKING SOUTH ^{in 10/21}
S.E.

Appendix C

Photo Log



Figure C-1. Dust control at the laundry effluent pond excavation.



Figure C-2. Completed laundry effluent pond excavation.

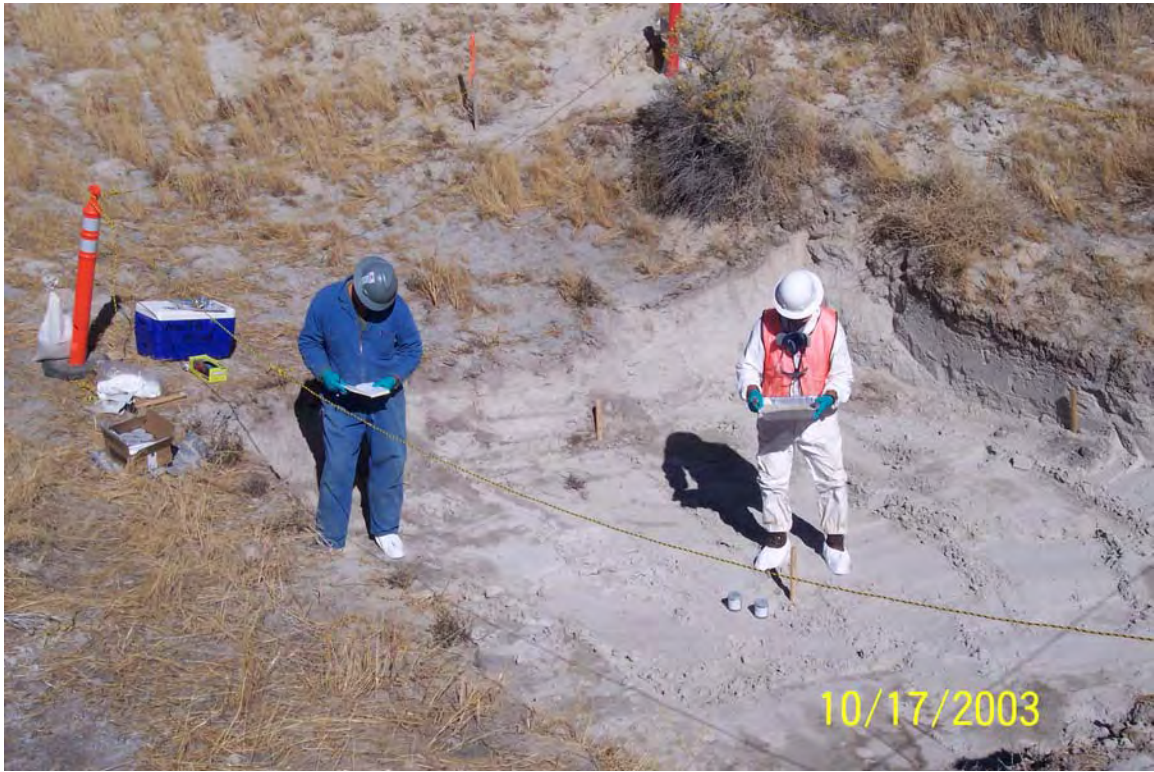


Figure C-3. Sampling at the laundry effluent pond.



Figure C-4. Close view of compositing procedure for split samples at laundry effluent pond.



Figure C-5. Contoured laundry effluent pond prior to biomat installation.



Figure C-6. Laundry effluent pond with biomat installed.



Figure C-7. Start of Waste Pile 3 excavation.



Figure C-8. Dust control at the Waste Pile 3 excavation.



Figure C-9. Loading an end dump truck.



Figure C-10. Preparing to close a roll-off bin filled with Waste Pile 3 soil.



Figure C-11. Completed Waste Pile 3 excavation.



Figure C-12. Surveyors at Waste Pile 3.



Figure C-13. Excavation locations were based on USACE rebar stakes (NW corner Waste Pile 3 shown here).



Figure C-14. Contoured Waste Pile 3.



Figure C-15. Start of Waste Pile 2 excavation and dual hose dust control.



Figure C-16. Partially loaded truck with Waste Pile 2 soil.



Figure C-17. Loading a roll-off bin still on the truck with Waste Pile 2 soil.



Figure C-18. Completed Waste Pile 2 excavation.



Figure C-19. Contoured Waste Pile 2.



Figure C-20. Start of Waste Pile 1 excavation with dust control.



Figure C-21. Checking Waste Pile 1 excavation depth with a laser level.



Figure C-22. Surveyors at Waste Pile 1, looking east.



Figure C-23. Contoured Waste Pile 1.



Figure C-24. Sewage pond excavation in progress.



Figure C-25. Completed sewage pond excavation.



Figure C-26. Completed biomat installation in the sewage pond excavation.

Appendix D

Surveyor's Report

To: Tom Matzen
North Wind, Inc.
P.O. Box 51174
Idaho Falls, Idaho 83405

Date: November 4, 2003

Project: USACE Tooele and Deseret Remediation No. 4221

Subject: Survey

We are sending you [x] attached [] under separate cover via U.S. Mail
the following items:

Certificate of Survey

These are transmitted as checked below:

- | | |
|---|---|
| <input type="checkbox"/> For Approval | <input type="checkbox"/> As Requested |
| <input type="checkbox"/> For Your Records | <input type="checkbox"/> Distribution |
| <input type="checkbox"/> For Review and Comment | <input type="checkbox"/> For Your Information |
| <input type="checkbox"/> _____ | |

BINGHAM ENGINEERING

CC: _____

By: Mark N Gregory
PLS

TRANSMITTAL

I, Mark N Gregory, do hereby certify that I am a Professional Land Surveyor as prescribed by the laws of the State of Utah, and that I hold Certificate No. 334576. I further certify that on October 22, 2003 a survey done under my supervision was performed for the "SWMU 11 Corrective Measures Implementation at the Tooele Army Depot." This survey was performed using a Topcon GTS-4 total station and the coordinates are NAD 1983 Utah Central Zone datum controlled by points provided in the "Corrective Measures Work Plan for SWMU 25, Former Battery Shop, USACE 2003". I further certify that the results of this survey exceed the requirements for a Third Order Survey.



Number	Northing	Easting	Raw Desc	Grid Northing	Grid Easting	Full Desc
1	6127.5381	9253.0113	CP HUB	7354344.965	1392914.534	CP HUB
6	6228.047	9041.997	FM REBAR	7354445.473	1392703.521	FM REBAR
7	6528.2725	9250.5316	FM REBAR	7354745.697	1392912.055	FM REBAR
8	6140.5058	9248.1141	TOP 6"CONC PIPE	7354357.932	1392909.637	TOP 6"CONC PIPE
9	6140.9729	9248.4243	CL 0	7354358.399	1392909.947	CL 0
10	6139.264	9254.7158	TOP	7354356.69	1392916.239	TOP
11	6140.4426	9254.2027	TOE	7354357.869	1392915.726	TOE
12	6142.0663	9239.7874	TOE	7354359.493	1392901.311	TOE
13	6141.5736	9238.9731	TOP	7354359	1392900.496	TOP
14	6144.1007	9238.9446	A6 TOP	7354361.527	1392900.468	A6 TOP
15	6144.8519	9239.0779	A6 TOE	7354362.278	1392900.601	A6 TOE
16	6152.0441	9227.0026	A6 TOE	7354369.47	1392888.526	A6 TOE
17	6151.0911	9226.7039	A6 TOP	7354368.517	1392888.227	A6 TOP
18	6165.2379	9233.5055	A6 TOP	7354382.664	1392895.029	A6 TOP
19	6163.2895	9238.5115	A6 TOP	7354380.716	1392900.035	A6 TOP
20	6162.827	9238.5644	A6 TOE	7354380.253	1392900.088	A6 TOE
21	6164.5938	9234.1734	A6 TOE	7354382.02	1392895.697	A6 TOE
22	6155.0232	9235.3981	A6 CL	7354372.45	1392896.921	A6 CL
23	6165.2381	9238.2423	TOP	7354382.664	1392899.765	TOP
24	6165.6355	9238.8833	TOE	7354383.062	1392900.406	TOE
25	6165.8532	9246.8868	CL 25	7354383.28	1392908.41	CL 25
26	6166.3776	9253.7071	TOE	7354383.804	1392915.23	TOE
27	6166.567	9254.6482	TOP	7354383.993	1392916.171	TOP
28	6189.4245	9255.0594	TOP	7354406.851	1392916.582	TOP
29	6188.8122	9253.9937	TOE	7354406.238	1392915.517	TOE
30	6190.5274	9247.6668	CL 50	7354407.954	1392909.19	CL 50
31	6191.9337	9239.8304	TOE	7354409.36	1392901.354	TOE
32	6192.5293	9238.9098	TOP	7354409.956	1392900.433	TOP
33	6216.6855	9247.6745	TOP	7354434.112	1392909.198	TOP
34	6216.455	9249.5707	TOE	7354433.881	1392911.094	TOE
35	6213.7524	9256.1876	CL 75	7354431.178	1392917.711	CL 75
36	6210.859	9263.3975	TOE	7354428.285	1392924.921	TOE
37	6209.991	9264.1246	TOP	7354427.417	1392925.648	TOP
38	6232.684	9276.2872	TOP	7354450.11	1392937.81	TOP
39	6232.9341	9275.5655	TOE	7354450.36	1392937.088	TOE
40	6235.7016	9266.8288	CL 100	7354453.128	1392928.352	CL 100

41	6238.3996	9260.6094	TOE	7354455.826	1392922.132	TOE
42	6238.8802	9259.7626	TOP	7354456.306	1392921.286	TOP
43	6261.4572	9268.2199	TOP	7354478.883	1392929.743	TOP
44	6261.6171	9269.0129	TOE	7354479.043	1392930.536	TOE
45	6259.7885	9276.1546	CL 125	7354477.214	1392937.678	CL 125
46	6258.5762	9282.4357	TOE	7354476.002	1392943.959	TOE
47	6258.288	9283.8936	TOP	7354475.714	1392945.417	TOP
48	6283.207	9289.0534	TOP	7354500.633	1392950.576	TOP
49	6283.125	9287.7025	TOE	7354500.551	1392949.226	TOE
50	6283.6433	9279.0773	CL 150	7354501.069	1392940.6	CL 150
51	6284.7284	9271.5794	TOE	7354502.154	1392933.102	TOE
52	6284.8429	9271.0596	TOP	7354502.269	1392932.583	TOP
53	6308.927	9273.5049	TOP	7354526.353	1392935.028	TOP
54	6308.7957	9274.4144	TOE	7354526.221	1392935.937	TOE
55	6308.6339	9280.1567	CL 175	7354526.06	1392941.68	CL 175
56	6309.4115	9288.6336	TOE	7354526.837	1392950.157	TOE
57	6309.4265	9289.5146	TOP	7354526.852	1392951.038	TOP
58	6335.5812	9290.0504	TOP	7354553.007	1392951.573	TOP
59	6335.4166	9289.3923	TOE	7354552.842	1392950.915	TOE
60	6333.5259	9279.7956	CL 200	7354550.952	1392941.319	CL 200
61	6333.3841	9273.5501	TOE	7354550.81	1392935.073	TOE
62	6333.634	9272.6682	TOP	7354551.06	1392934.191	TOP
63	6356.2594	9270.4907	TOP	7354573.685	1392932.014	TOP
64	6356.4133	9271.1366	TOE	7354573.839	1392932.66	TOE
65	6358.5448	9277.5115	CL 225	7354575.97	1392939.035	CL 225
66	6359.5579	9284.694	TOE	7354576.983	1392946.217	TOE
67	6359.5491	9285.5698	TOP	7354576.975	1392947.093	TOP
68	6383.8928	9283.3588	TOP	7354601.318	1392944.882	TOP
69	6383.3537	9282.6625	TOE	7354600.779	1392944.186	TOE
70	6384.4407	9276.0983	CL 250	7354601.866	1392937.621	CL 250
71	6382.8613	9266.3707	TOE	7354600.287	1392927.894	TOE
72	6382.9026	9265.7113	TOP	7354600.328	1392927.234	TOP
73	6025.7081	9196.6475	BLDG1 COR	7354243.135	1392858.171	BLDG1 COR
74	6085.6096	9181.2635	BLDG1 COR	7354303.036	1392842.787	BLDG1 COR
75	6049.6306	9041.9765	BLDG1 COR	7354267.057	1392703.501	BLDG1 COR
76	6639.2137	8166.3992	CP HUB	7354856.638	1391827.927	CP HUB
78	6493.6959	8216.4244	TOP	7354711.121	1391877.952	TOP

79	6493.2318	8215.2219	TOE	7354710.657	1391876.749	TOE
80	6465.0373	8212.0104	TOE	7354682.462	1391873.538	TOE
81	6463.1332	8213.0522	TOP	7354680.558	1391874.58	TOP
82	6465.8884	8189.3452	TOP	7354683.314	1391850.873	TOP
83	6467.2287	8189.217	TOE A4	7354684.654	1391850.744	TOE A4
84	6471.2888	8169.9533	TOE	7354688.714	1391831.481	TOE
85	6470.2841	8168.2378	TOP	7354687.709	1391829.765	TOP
86	6485.187	8171.7218	A5	7354702.612	1391833.249	A5
87	6499.0383	8175.7724	TOE	7354716.463	1391837.3	TOE
88	6499.6333	8175.6537	TOP	7354717.058	1391837.181	TOP
89	6485.4176	8171.4525	TOP	7354702.843	1391832.98	TOP
90	6499.0559	8197.16	TOP	7354716.481	1391858.687	TOP
91	6497.9431	8197.2183	TOE A2	7354715.368	1391858.746	TOE A2
92	6478.0243	8214.898	A3	7354695.449	1391876.425	A3
93	6477.8879	8216.0577	TOP	7354695.313	1391877.585	TOP
94	6483.5299	8192.8444	A1	7354700.955	1391854.372	A1
95	6580.8458	8147.942	TOP	7354798.27	1391809.47	TOP
96	6581.8107	8146.8622	TOE	7354799.235	1391808.39	TOE
97	6580.2807	8133.4296	TOP	7354797.705	1391794.957	TOP
98	6582.5435	8133.9164	TOE A6	7354799.968	1391795.444	TOE A6
99	6586.0435	8112.5424	TOE A7	7354803.468	1391774.07	TOE A7
100	6584.2242	8112.2236	TOP	7354801.649	1391773.751	TOP
101	6588.8372	8098.2943	TOP	7354806.262	1391759.822	TOP
102	6589.917	8099.5205	TOE	7354807.342	1391761.048	TOE
103	6607.25	8097.4946	TOE A8	7354824.675	1391759.022	TOE A8
104	6607.2403	8096.6856	TOP	7354824.665	1391758.213	TOP
105	6629.3061	8097.0278	TOP	7354846.731	1391758.556	TOP
106	6628.5059	8097.7462	TOE	7354845.93	1391759.274	TOE
107	6628.558	8117.4865	TOP	7354845.982	1391779.014	TOP
108	6626.627	8117.2047	TOE A3	7354844.052	1391778.732	TOE A3
109	6623.5715	8132.7956	TOE A4	7354840.996	1391794.323	TOE A4
110	6625.7886	8132.976	TOP	7354843.213	1391794.504	TOP
111	6622.372	8146.2916	TOP	7354839.796	1391807.819	TOP
112	6621.745	8145.7153	TOE	7354839.17	1391807.243	TOE
113	6601.4815	8147.8251	TOP	7354818.906	1391809.353	TOP
114	6601.5571	8147.0873	TOE A5	7354818.982	1391808.615	TOE A5
115	6602.0639	8133.8763	A1	7354819.488	1391795.404	A1

116	6604.4742	8115.0548	A2	7354821.899	1391776.582	A2
117	6642.0085	8094.3135	TOP	7354859.433	1391755.841	TOP
118	6642.8696	8093.744	TOE	7354860.294	1391755.272	TOE
119	6640.6998	8078.2526	TOP	7354858.124	1391739.78	TOP
120	6641.9616	8078.1726	TOE A6	7354859.386	1391739.7	TOE A6
121	6642.6617	8042.8334	TOE A7	7354860.086	1391704.361	TOE A7
122	6641.539	8043.0248	TOP	7354858.963	1391704.553	TOP
123	6644.7664	8024.1085	TOP	7354862.191	1391685.636	TOP
124	6645.4965	8024.9876	TOE	7354862.921	1391686.515	TOE
125	6660.2572	8025.6409	TOE A8	7354877.682	1391687.169	TOE A8
126	6660.2914	8024.9855	TOP	7354877.716	1391686.513	TOP
127	6674.0865	8026.359	TOP	7354891.511	1391687.887	TOP
128	6672.9637	8026.9647	TOE	7354890.388	1391688.493	TOE
129	6674.257	8042.0945	TOE A3	7354891.681	1391703.622	TOE A3
130	6674.845	8042.0451	TOP	7354892.269	1391703.573	TOP
131	6674.3931	8077.2979	TOP	7354891.817	1391738.826	TOP
132	6672.8042	8077.1253	TOE A4	7354890.229	1391738.653	TOE A4
133	6671.3272	8097.4251	TOE	7354888.752	1391758.953	TOE
134	6671.9363	8098.2926	TOP	7354889.361	1391759.82	TOP
135	6656.5875	8097.1248	TOP	7354874.012	1391758.652	TOP
136	6656.5472	8096.4247	TOE A5	7354873.972	1391757.952	TOE A5
137	6657.5636	8077.8647	A1	7354874.988	1391739.392	A1
138	6659.1426	8043.2072	A2	7354876.567	1391704.735	A2
139	6232.5019	7345.8589	CP HUB	7354449.928	1391007.391	CP HUB
149	6137.2088	7357.0286	TOE A7	7354354.635	1391018.56	TOE A7
150	6136.4304	7357.6088	TOP	7354353.857	1391019.14	TOP
151	6129.722	7348.6522	TOP	7354347.149	1391010.184	TOP
152	6130.4519	7348.5482	TOE	7354347.878	1391010.08	TOE
153	6139.3045	7337.1902	TOE A8	7354356.731	1390998.722	TOE A8
154	6138.9212	7336.7777	TOP	7354356.348	1390998.309	TOP
155	6149.0799	7326.3741	TOP	7354366.506	1390987.906	TOP
156	6149.4776	7327.7121	TOE	7354366.904	1390989.244	TOE
157	6159.6537	7337.0459	TOE A3	7354377.08	1390998.577	TOE A3
158	6160.4925	7336.398	TOP	7354377.919	1390997.93	TOP
162	6148.8639	7347.1113	A2	7354366.29	1391008.643	A2
163	6338.5758	7261.5474	TOP	7354556.001	1390923.078	TOP
164	6338.7301	7260.1568	TOE	7354556.156	1390921.687	TOE

165	6330.3437	7256.0389	TOP	7354547.769	1390917.57	TOP
166	6333.0489	7253.5519	TOE A4	7354550.475	1390915.082	TOE A4
167	6329.0519	7251.197	TOE A7	7354546.478	1390912.728	TOE A7
168	6328.8512	7247.9183	TOE	7354546.277	1390909.449	TOE
169	6329.2641	7246.0774	TOE A6	7354546.69	1390907.608	TOE A6
170	6326.8666	7247.26	TOP	7354544.292	1390908.791	TOP
171	6333.6024	7241.4266	TOP	7354551.028	1390902.958	TOP
172	6334.4956	7242.549	TOE A5	7354551.921	1390904.08	TOE A5
173	6340.3156	7238.1138	TOE	7354557.741	1390899.644	TOE
174	6340.7157	7237.1695	TOP	7354558.141	1390898.7	TOP
175	6347.0303	7243.7866	TOP	7354564.456	1390905.317	TOP
176	6345.6151	7244.9977	TOE A2	7354563.041	1390906.528	TOE A2
177	6350.7103	7249.7799	TOE	7354568.136	1390911.311	TOE
178	6345.0743	7254.933	TOE A3	7354562.5	1390916.464	TOE A3
179	6338.8798	7248.8668	A1	7354556.305	1390910.397	A1
180	6345.4705	7255.5226	TOP	7354562.896	1390917.053	TOP
181	6352.434	7250.2332	TOP	7354569.86	1390911.764	TOP
182	6163.5178	7181.4697	FM WELL N3A	7354380.944	1390843.002	FM WELL N3A
183	6110.2646	7301.5508	FM CP 83	7354327.691	1390963.083	FM CP 83
184	5627.2547	7277.0345	BLDG1	7353844.684	1390938.568	BLDG1
185	5583.1764	7117.055	BLDG1	7353800.606	1390778.589	BLDG1
186	5381.9439	7632.3391	BLDG1	7353599.375	1391293.871	BLDG1
187	5408.7222	7729.1206	BLDG1	7353626.153	1391390.652	BLDG1
141	6191.06	7371.05	TOP	7354408.06	1391032.05	TOP
142	6189.95	7371.65	TOE	7354406.95	1391032.65	TOE
143	6182.14	7383.72	TOE A5	7354399.14	1391044.72	TOE A5
144	6182.75	7384.37	TOP	7354399.75	1391045.37	TOP
145	6172.41	7393.03	TOE	7354389.41	1391054.03	TOE
146	6171.53	7393.96	TOP	7354388.53	1391054.96	TOP
147	6158.23	7381.39	TOE A6	7354375.23	1391042.39	TOE A6
148	6157.38	7382.19	TOP	7354374.38	1391043.19	TOP
160	6181.25	7360.52	TOP	7354398.25	1391021.52	TOP
159	6182.07	7360.02	TOE A4	7354399.07	1391021.02	TOE A4
161	6169.81	7370.53	A1	7354386.81	1391031.53	A1

Appendix E

Analytical Reports

October 29, 2003

Thomas Matzen
North Wind Environmental, Inc.
545 Shoup Avenue
Idaho Falls, ID 83402
(208) 528-8718 Fax:

Project: TEAD SWMU 11

Work Order: 0310117

Project ID: TEAD SWMU 11

Dear Thomas Matzen,

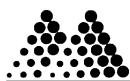
Thank you for using Mountain States Analytical, LLC (MSA) as your environmental information resource. Our reports are designed to meet the Certified Laboratory Reporting Requirements of Utah Administrative Code R444-14-12(10) and the National Environmental Laboratory Accreditation Program (NELAP), Section 5.13.

This is Report Number 0310117-1 and contains 49 pages of information for the 21 samples submitted to MSA on Friday, October 17, 2003. Any sample receipt documentation detailed in the Work Order Receipt Summary of this report (e.g., Chain-of-Custody, Work Order Authorization, etc.) and/or analytical results noted as "see attached " are included by reference as attachments following page 49. For regulatory compliance reporting, individual pages or portions of this report may not be separated. Except as noted, the test results for the methods and parameters listed on MSA's most recent NELAC certification letter meet all requirements of NELAC.

If you have any questions regarding the information contained in this report, please feel free to contact me at (800)973-6724 ext. 3026 or by e-mail at rlarsen@msalabs.net.

Mountain States Analytical, LLC

Rolf E. Larsen
Senior Project Manager



Sample Summary

Client: North Wind Environmental, Inc.
Project: TEAD SWMU 11
Project ID: TEAD SWMU 11

Report Number: 0310117-1
Date Reported: 10/29/03
Work Order: 0310117

Lab Sample ID	Client Sample ID	Additional Sample Information	Matrix	Date Collected
0310117-01A	S11LP-03-CNF-A1		Soil	10/17/03
0310117-01B	SDG: NWE-0310117			11/10/03
0310117-02A	S11LP-03-CNF-A2		Soil	10/17/03
0310117-03A	S11LP-03-CNF-A3		Soil	10/17/03
0310117-04A	S11LP-03-CNF-A4		Soil	10/17/03
0310117-05A	S11LP-03-CNF-A5		Soil	10/17/03
0310117-06A	S11LP-03-CNF-A6		Soil	10/17/03
0310117-07A	S11LP-03-CNF-A7		Soil	10/17/03
0310117-08A	S11WP2-03-CNF-A1		Soil	10/17/03
0310117-09A	S11WP2-03-CNF-A2		Soil	10/17/03
0310117-10A	S11WP2-03-CNF-A3		Soil	10/17/03
0310117-11A	S11WP2-03-CNF-A4		Soil	10/17/03
0310117-12A	S11WP2-03-CNF-A5		Soil	10/17/03
0310117-13A	S11WP2-03-CNF-A6		Soil	10/17/03
0310117-14A	S11WP2-03-CNF-A7		Soil	10/17/03
0310117-15A	S11WP2-03-CNF-A8		Soil	10/17/03
0310117-16A	S11WP3-03-CNF-A1		Soil	10/17/03
0310117-17A	S11WP3-03-CNF-A2		Soil	10/17/03
0310117-18A	S11WP3-03-CNF-A3		Soil	10/17/03
0310117-19A	S11WP3-03-CNF-A4		Soil	10/17/03
0310117-20A	S11WP3-03-CNF-A5		Soil	10/17/03
0310117-21A	S11WP3-03-CNF-A7		Water	10/17/03



Holding Time Summary

Client: North Wind Environmental, Inc.
Project: TEAD SWMU 11
Project ID: TEAD SWMU 11

Report Number: 0310117-1
Date Reported: 10/29/03
Work Order: 0310117

Sample ID	Client Sample ID	Date Collected						
0310117-01A	S11LP-03-CNF-A1	10/17/03 12:15						
		Leachate						
Parameter		Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT
Moisture							10/20/03	270
Semi-Volatiles (USACE)					10/20/03 09:30	14	10/20/03 20:35	40
0310117-02A	S11LP-03-CNF-A2	10/17/03 12:24						
		Leachate						
Parameter		Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT
Moisture							10/20/03	270
Semi-Volatiles (USACE)					10/20/03 09:30	14	10/20/03 22:08	40
0310117-03A	S11LP-03-CNF-A3	10/17/03 12:24						
		Leachate						
Parameter		Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT
Moisture							10/20/03	270
Semi-Volatiles (USACE)					10/20/03 09:30	14	10/20/03 22:39	40
0310117-04A	S11LP-03-CNF-A4	10/17/03 12:32						
		Leachate						
Parameter		Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT
Moisture							10/20/03	270
Semi-Volatiles (USACE)					10/20/03 09:30	14	10/20/03 23:10	40
0310117-05A	S11LP-03-CNF-A5	10/17/03 12:35						
		Leachate						
Parameter		Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT
Moisture							10/20/03	270
Semi-Volatiles (USACE)					10/20/03 09:30	14	10/20/03 23:41	40
0310117-06A	S11LP-03-CNF-A6	10/17/03 12:37						
		Leachate						
Parameter		Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT
Moisture							10/20/03	270
Semi-Volatiles (USACE)					10/20/03 09:30	14	10/21/03 00:12	40

* - The recommended holding time was exceeded



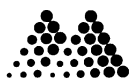
Holding Time Summary

Client: North Wind Environmental, Inc.
Project: TEAD SWMU 11
Project ID: TEAD SWMU 11

Report Number: 0310117-1
Date Reported: 10/29/03
Work Order: 0310117

Sample ID	Client Sample ID	Date Collected						
0310117-07A	S11LP-03-CNF-A7	10/17/03 12:41						
Parameter	Start Date	Leachate End Date	HT	Prep Date	HT	Analysis Date	HT	
Moisture						10/20/03	270	
Semi-Volatiles (USACE)				10/20/03 09:30	14	10/21/03 00:43	40	
0310117-08A	S11WP2-03-CNF-A1	10/17/03 13:30						
Parameter	Start Date	Leachate End Date	HT	Prep Date	HT	Analysis Date	HT	
Metals by hrICP (USACE)				10/20/03 12:00		10/21/03 11:23	180	
Moisture						10/20/03	270	
0310117-09A	S11WP2-03-CNF-A2	10/17/03 13:34						
Parameter	Start Date	Leachate End Date	HT	Prep Date	HT	Analysis Date	HT	
Metals by hrICP (USACE)				10/20/03 12:00		10/21/03 12:07	180	
Moisture						10/20/03	270	
0310117-10A	S11WP2-03-CNF-A3	10/17/03 13:35						
Parameter	Start Date	Leachate End Date	HT	Prep Date	HT	Analysis Date	HT	
Metals by hrICP (USACE)				10/20/03 12:00		10/21/03 12:12	180	
Moisture						10/20/03	270	
0310117-11A	S11WP2-03-CNF-A4	10/17/03 13:36						
Parameter	Start Date	Leachate End Date	HT	Prep Date	HT	Analysis Date	HT	
Metals by hrICP (USACE)				10/20/03 12:00		10/21/03 12:16	180	
Moisture						10/20/03	270	
0310117-12A	S11WP2-03-CNF-A5	10/17/03 13:38						
Parameter	Start Date	Leachate End Date	HT	Prep Date	HT	Analysis Date	HT	
Metals by hrICP (USACE)				10/20/03 12:00		10/21/03 12:20	180	

* - The recommended holding time was exceeded



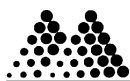
Holding Time Summary

Client: North Wind Environmental, Inc.
Project: TEAD SWMU 11
Project ID: TEAD SWMU 11

Report Number: 0310117-1
Date Reported: 10/29/03
Work Order: 0310117

Sample ID	Client Sample ID	Date Collected						
Moisture						10/20/03	270	
0310117-13A	S11WP2-03-CNF-A6	10/17/03 13:39						
		Leachate						
Parameter	Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT	
Metals by hrICP (USACE)				10/20/03 12:00		10/21/03 12:25	180	
Moisture						10/20/03	270	
0310117-14A	S11WP2-03-CNF-A7	10/17/03 13:40						
		Leachate						
Parameter	Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT	
Metals by hrICP (USACE)				10/20/03 12:00		10/21/03 12:29	180	
Moisture						10/20/03	270	
0310117-15A	S11WP2-03-CNF-A8	10/17/03 13:41						
		Leachate						
Parameter	Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT	
Metals by hrICP (USACE)				10/20/03 12:00		10/21/03 12:33	180	
Moisture						10/20/03	270	
0310117-16A	S11WP3-03-CNF-A1	10/17/03 13:04						
		Leachate						
Parameter	Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT	
Metals by hrICP (USACE)				10/20/03 12:00		10/21/03 12:38	180	
Moisture						10/20/03	270	
0310117-17A	S11WP3-03-CNF-A2	10/17/03 13:01						
		Leachate						
Parameter	Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT	
Metals by hrICP (USACE)				10/20/03 12:00		10/21/03 12:51	180	
Moisture						10/20/03	270	
0310117-18A	S11WP3-03-CNF-A3	10/17/03 13:04						
		Leachate						
Parameter	Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT	

* - The recommended holding time was exceeded



Holding Time Summary

Client: North Wind Environmental, Inc.
Project: TEAD SWMU 11
Project ID: TEAD SWMU 11

Report Number: 0310117-1
Date Reported: 10/29/03
Work Order: 0310117

Sample ID	Client Sample ID	Date Collected						
Metals by hrICP (USACE)		10/20/03 12:00		10/21/03 12:55		180		
Moisture				10/20/03		270		
0310117-19A	S11WP3-03-CNF-A4	10/17/03 13:06						
	Leachate							
Parameter	Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT	
Metals by hrICP (USACE)				10/20/03 12:00		10/21/03 12:59	180	
Moisture						10/20/03	270	
0310117-20A	S11WP3-03-CNF-A5	10/17/03 13:08						
	Leachate							
Parameter	Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT	
Metals by hrICP (USACE)				10/20/03 12:00		10/21/03 13:04	180	
Moisture						10/20/03	270	
0310117-21A	S11WP3-03-CNF-A7	10/17/03 23:40						
	Leachate							
Parameter	Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT	
Metals by hrICP (USACE)				10/20/03 11:30		10/28/03 17:26	180	

* - The recommended holding time was exceeded

Client: Thomas Matzen
North Wind Environmental, Inc.
545 Shoup Avenue
Idaho Falls, ID 83402
(208) 528-8718

Report Number: 0310117-1
Date Reported: 10/29/03
Work Order: 0310117
Lab Sample ID: 0310117-01A
Client Sample ID: S11LP-03-CNF-A1
Date Collected: 10/17/03
Date Received: 10/17/03 16:00
Matrix: Soil
COC ID:

Project: TEAD SWMU 11
Project ID: TEAD SWMU 11
Purchase Order:

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
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ASTM D2216-92: Moisture, Solid

Percent Moisture	4.81	0.01	0.01	%	1	10/20/03	RH
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SW-846 8270C: Semi-Volatiles (USACE), Solid

Benz(a)anthracene	U	42	347	µg/Kg	1	10/20/03 20:35	KPF
Benzo(b)fluoranthene	U	84	347	µg/Kg	1	10/20/03 20:35	KPF
bis(2-Ethylhexyl)phthalate	116 J	63	347	µg/Kg	1	10/20/03 20:35	KPF

Surrogates
Recovery Range

2,4,6-Tribromophenol	122	45-135	% Recovery	1	10/20/03 20:35	KPF
2-Fluorophenol	69.9	45-135	% Recovery	1	10/20/03 20:35	KPF
2-Fluorobiphenyl	72.5	45-135	% Recovery	1	10/20/03 20:35	KPF
Nitrobenzene-d5	71.9	45-135	% Recovery	1	10/20/03 20:35	KPF
Phenol-d6	69.6	45-135	% Recovery	1	10/20/03 20:35	KPF
Terphenyl-d14	81.7	45-135	% Recovery	1	10/20/03 20:35	KPF

Note for 10/20/03 20:35 analysis: Results are corrected for dry weight.

SW-846 3550B: Ultrasonic Extraction, SV, Solid

Prep Batch ID: 12380	10/20/03 09:30	JMR
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Note for 10/20/03 09:30 analysis: Fine particulate fell out of sample on N-evap.

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

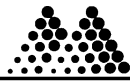
S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

* - Result is greater than the associated action level



Client: Thomas Matzen
North Wind Environmental, Inc.
545 Shoup Avenue
Idaho Falls, ID 83402
(208) 528-8718

Report Number: 0310117-1
Date Reported: 10/29/03
Work Order: 0310117
Lab Sample ID: 0310117-02A
Client Sample ID: S11LP-03-CNF-A2
Date Collected: 10/17/03
Date Received: 10/17/03 16:00
Matrix: Soil
COC ID:

Project: TEAD SWMU 11
Project ID: TEAD SWMU 11
Purchase Order:

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
ASTM D2216-92: Moisture, Solid							
Percent Moisture	12.2	0.01	0.01	%	1	10/20/03	RH
SW-846 8270C: Semi-Volatiles (USACE), Solid							
Benz(a)anthracene	U	45.6	376	µg/Kg	1	10/20/03 22:08	KPF
Benzo(b)fluoranthene	U	91.1	376	µg/Kg	1	10/20/03 22:08	KPF
bis(2-Ethylhexyl)phthalate	472	68.3	376	µg/Kg	1	10/20/03 22:08	KPF
Surrogates		Recovery Range					
2,4,6-Tribromophenol	124	45-135		% Recovery	1	10/20/03 22:08	KPF
2-Fluorophenol	88.1	45-135		% Recovery	1	10/20/03 22:08	KPF
2-Fluorobiphenyl	90.6	45-135		% Recovery	1	10/20/03 22:08	KPF
Nitrobenzene-d5	93.3	45-135		% Recovery	1	10/20/03 22:08	KPF
Phenol-d6	86.5	45-135		% Recovery	1	10/20/03 22:08	KPF
Terphenyl-d14	94.9	45-135		% Recovery	1	10/20/03 22:08	KPF

Note for 10/20/03 22:08 analysis: Results are corrected for dry weight.

SW-846 3550B: Ultrasonic Extraction, SV, Solid

Prep Batch ID: 12380 10/20/03 09:30 JMR

Note for 10/20/03 09:30 analysis: Extract was dark and thick.

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

* - Result is greater than the associated action level

Client: Thomas Matzen
North Wind Environmental, Inc.
545 Shoup Avenue
Idaho Falls, ID 83402
(208) 528-8718

Report Number: 0310117-1
Date Reported: 10/29/03
Work Order: 0310117
Lab Sample ID: 0310117-03A
Client Sample ID: S11LP-03-CNF-A3
Date Collected: 10/17/03
Date Received: 10/17/03 16:00
Matrix: Soil
COC ID:

Project: TEAD SWMU 11
Project ID: TEAD SWMU 11
Purchase Order:

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
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ASTM D2216-92: Moisture, Solid

Percent Moisture	4.55	0.01	0.01	%	1	10/20/03	RH
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SW-846 8270C: Semi-Volatiles (USACE), Solid

Benz(a)anthracene	U	41.9	346	µg/Kg	1	10/20/03 22:39	KPF
Benzo(b)fluoranthene	U	83.8	346	µg/Kg	1	10/20/03 22:39	KPF
bis(2-Ethylhexyl)phthalate	136 J	62.9	346	µg/Kg	1	10/20/03 22:39	KPF

Surrogates
Recovery Range

2,4,6-Tribromophenol	119	45-135	% Recovery	1	10/20/03 22:39	KPF
2-Fluorophenol	78.0	45-135	% Recovery	1	10/20/03 22:39	KPF
2-Fluorobiphenyl	79.5	45-135	% Recovery	1	10/20/03 22:39	KPF
Nitrobenzene-d5	80.3	45-135	% Recovery	1	10/20/03 22:39	KPF
Phenol-d6	74.9	45-135	% Recovery	1	10/20/03 22:39	KPF
Terphenyl-d14	99.1	45-135	% Recovery	1	10/20/03 22:39	KPF

Note for 10/20/03 22:39 analysis: Results are corrected for dry weight.

SW-846 3550B: Ultrasonic Extraction, SV, Solid

Prep Batch ID: 12380	10/20/03 09:30	JMR
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U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

* - Result is greater than the associated action level

Client: Thomas Matzen
North Wind Environmental, Inc.
545 Shoup Avenue
Idaho Falls, ID 83402
(208) 528-8718

Report Number: 0310117-1
Date Reported: 10/29/03
Work Order: 0310117
Lab Sample ID: 0310117-04A
Client Sample ID: S11LP-03-CNF-A4
Date Collected: 10/17/03
Date Received: 10/17/03 16:00
Matrix: Soil
COC ID:

Project: TEAD SWMU 11
Project ID: TEAD SWMU 11
Purchase Order:

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
ASTM D2216-92: Moisture, Solid							
Percent Moisture	11.5	0.01	0.01	%	1	10/20/03	RH
SW-846 8270C: Semi-Volatiles (USACE), Solid							
Benz(a)anthracene	U	45.2	373	µg/Kg	1	10/20/03 23:10	KPF
Benzo(b)fluoranthene	U	90.4	373	µg/Kg	1	10/20/03 23:10	KPF
bis(2-Ethylhexyl)phthalate	585	67.8	373	µg/Kg	1	10/20/03 23:10	KPF
Surrogates		Recovery Range					
2,4,6-Tribromophenol	121	45-135		% Recovery	1	10/20/03 23:10	KPF
2-Fluorophenol	87.1	45-135		% Recovery	1	10/20/03 23:10	KPF
2-Fluorobiphenyl	92.3	45-135		% Recovery	1	10/20/03 23:10	KPF
Nitrobenzene-d5	95.3	45-135		% Recovery	1	10/20/03 23:10	KPF
Phenol-d6	84.6	45-135		% Recovery	1	10/20/03 23:10	KPF
Terphenyl-d14	96.9	45-135		% Recovery	1	10/20/03 23:10	KPF

Note for 10/20/03 23:10 analysis: Results are corrected for dry weight.

SW-846 3550B: Ultrasonic Extraction, SV, Solid

Prep Batch ID: 12380 10/20/03 09:30 JMR

Note for 10/20/03 09:30 analysis: Extract was dark and thick.

U - Not detected above the MDL
J - Analyte detected below the PQL
* - Result is greater than the associated action level

B - Analyte detected in the associated Method Blank
E - Result is outside of quantitation range

S - Results outside normal recovery limits
R - RPD outside normal precision limits

Client: Thomas Matzen
North Wind Environmental, Inc.
545 Shoup Avenue
Idaho Falls, ID 83402
(208) 528-8718

Report Number: 0310117-1
Date Reported: 10/29/03
Work Order: 0310117
Lab Sample ID: 0310117-05A
Client Sample ID: S11LP-03-CNF-A5
Date Collected: 10/17/03
Date Received: 10/17/03 16:00
Matrix: Soil
COC ID:

Project: TEAD SWMU 11
Project ID: TEAD SWMU 11
Purchase Order:

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
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ASTM D2216-92: Moisture, Solid

Percent Moisture	11.0	0.01	0.01	%	1	10/20/03	RH
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SW-846 8270C: Semi-Volatiles (USACE), Solid

Benz(a)anthracene	U	44.9	371	µg/Kg	1	10/20/03 23:41	KPF
Benzo(b)fluoranthene	U	89.9	371	µg/Kg	1	10/20/03 23:41	KPF
bis(2-Ethylhexyl)phthalate	124 J	67.4	371	µg/Kg	1	10/20/03 23:41	KPF

Surrogates
Recovery Range

2,4,6-Tribromophenol	116	45-135	% Recovery	1	10/20/03 23:41	KPF
2-Fluorophenol	76.2	45-135	% Recovery	1	10/20/03 23:41	KPF
2-Fluorobiphenyl	75.5	45-135	% Recovery	1	10/20/03 23:41	KPF
Nitrobenzene-d5	79.5	45-135	% Recovery	1	10/20/03 23:41	KPF
Phenol-d6	73.3	45-135	% Recovery	1	10/20/03 23:41	KPF
Terphenyl-d14	98.7	45-135	% Recovery	1	10/20/03 23:41	KPF

Note for 10/20/03 23:41 analysis: Results are corrected for dry weight.

SW-846 3550B: Ultrasonic Extraction, SV, Solid

Prep Batch ID: 12380	10/20/03 09:30	JMR
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U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

* - Result is greater than the associated action level

11

Client: Thomas Matzen
North Wind Environmental, Inc.
545 Shoup Avenue
Idaho Falls, ID 83402
(208) 528-8718

Report Number: 0310117-1
Date Reported: 10/29/03
Work Order: 0310117
Lab Sample ID: 0310117-06A
Client Sample ID: S11LP-03-CNF-A6
Date Collected: 10/17/03
Date Received: 10/17/03 16:00
Matrix: Soil
COC ID:

Project: TEAD SWMU 11
Project ID: TEAD SWMU 11
Purchase Order:

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
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ASTM D2216-92: Moisture, Solid

Percent Moisture	12.0	0.01	0.01	%	1	10/20/03	RH
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SW-846 8270C: Semi-Volatiles (USACE), Solid

Benz(a)anthracene	U	45.5	375	µg/Kg	1	10/21/03 00:12	KPF
Benzo(b)fluoranthene	U	90.9	375	µg/Kg	1	10/21/03 00:12	KPF
bis(2-Ethylhexyl)phthalate	U	68.2	375	µg/Kg	1	10/21/03 00:12	KPF

Surrogates
Recovery Range

2,4,6-Tribromophenol	122	45-135	% Recovery	1	10/21/03 00:12	KPF
2-Fluorophenol	79.1	45-135	% Recovery	1	10/21/03 00:12	KPF
2-Fluorobiphenyl	81.4	45-135	% Recovery	1	10/21/03 00:12	KPF
Nitrobenzene-d5	84.5	45-135	% Recovery	1	10/21/03 00:12	KPF
Phenol-d6	76.6	45-135	% Recovery	1	10/21/03 00:12	KPF
Terphenyl-d14	97.7	45-135	% Recovery	1	10/21/03 00:12	KPF

Note for 10/21/03 00:12 analysis: Results are corrected for dry weight.

SW-846 3550B: Ultrasonic Extraction, SV, Solid

Prep Batch ID: 12380	10/20/03 09:30	JMR
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U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

* - Result is greater than the associated action level

Client: Thomas Matzen
North Wind Environmental, Inc.
545 Shoup Avenue
Idaho Falls, ID 83402
(208) 528-8718

Report Number: 0310117-1
Date Reported: 10/29/03
Work Order: 0310117
Lab Sample ID: 0310117-07A
Client Sample ID: S11LP-03-CNF-A7
Date Collected: 10/17/03
Date Received: 10/17/03 16:00
Matrix: Soil
COC ID:

Project: TEAD SWMU 11
Project ID: TEAD SWMU 11
Purchase Order:

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
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ASTM D2216-92: Moisture, Solid

Percent Moisture	6.70	0.01	0.01	%	1	10/20/03	RH
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SW-846 8270C: Semi-Volatiles (USACE), Solid

Benz(a)anthracene	U	214	1770	µg/Kg	1	10/21/03 00:43	KPF
Benzo(b)fluoranthene	U	429	1770	µg/Kg	1	10/21/03 00:43	KPF
bis(2-Ethylhexyl)phthalate	2530	322	1770	µg/Kg	1	10/21/03 00:43	KPF

Surrogates
Recovery Range

2,4,6-Tribromophenol	119	45-135	% Recovery	1	10/21/03 00:43	KPF
2-Fluorophenol	102	45-135	% Recovery	1	10/21/03 00:43	KPF
2-Fluorobiphenyl	101	45-135	% Recovery	1	10/21/03 00:43	KPF
Nitrobenzene-d5	101	45-135	% Recovery	1	10/21/03 00:43	KPF
Phenol-d6	103	45-135	% Recovery	1	10/21/03 00:43	KPF
Terphenyl-d14	115	45-135	% Recovery	1	10/21/03 00:43	KPF

Note for 10/21/03 00:43 analysis: Results are corrected for dry weight.

SW-846 3550B: Ultrasonic Extraction, SV, Solid

Prep Batch ID: 12380	5	10/20/03 09:30	JMR
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Note for 10/20/03 09:30 analysis: Due to the matrix, the extract would not concentrate to the expected final volume. Extract was dark and thick.

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

* - Result is greater than the associated action level

Client: Thomas Matzen
North Wind Environmental, Inc.
545 Shoup Avenue
Idaho Falls, ID 83402
(208) 528-8718

Report Number: 0310117-1
Date Reported: 10/29/03
Work Order: 0310117
Lab Sample ID: 0310117-08A
Client Sample ID: S11WP2-03-CNF-A1
Date Collected: 10/17/03
Date Received: 10/17/03 16:00
Matrix: Soil
COC ID:

Project: TEAD SWMU 11
Project ID: TEAD SWMU 11
Purchase Order:

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
ASTM D2216-92: Moisture, Solid							
Percent Moisture	4.74	0.01	0.01	%	1	10/20/03	RH
SW-846 3050B: Flame/hrICP Prep, Solid							
Prep Batch ID: 12381					50	10/20/03 12:00	BBO
SW-846 6010B: Metals by hrICP (USACE), Solid							
Arsenic	4.20 J	1.57	7.92	mg/Kg	1	10/21/03 11:23	JMR
Lead	2.41 J	1.57	7.92	mg/Kg	1	10/21/03 11:23	JMR

Note for 10/21/03 11:23 analysis: Results are corrected for dry weight.

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

* - Result is greater than the associated action level

Client: Thomas Matzen
North Wind Environmental, Inc.
545 Shoup Avenue
Idaho Falls, ID 83402
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Report Number: 0310117-1
Date Reported: 10/29/03
Work Order: 0310117
Lab Sample ID: 0310117-09A
Client Sample ID: S11WP2-03-CNF-A2
Date Collected: 10/17/03
Date Received: 10/17/03 16:00
Matrix: Soil
COC ID:

Project: TEAD SWMU 11
Project ID: TEAD SWMU 11
Purchase Order:

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
ASTM D2216-92: Moisture, Solid							
Percent Moisture	4.69	0.01	0.01	%	1	10/20/03	RH
SW-846 3050B: Flame/hrICP Prep, Solid							
Prep Batch ID: 12381					52	10/20/03 12:00	BBO
SW-846 6010B: Metals by hrICP (USACE), Solid							
Arsenic	6.40 J	1.57	8.11	mg/Kg	1	10/21/03 12:07	JMR
Lead	28.0	1.57	8.11	mg/Kg	1	10/21/03 12:07	JMR

Note for 10/21/03 12:07 analysis: Results are corrected for dry weight.

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

* - Result is greater than the associated action level

Client: Thomas Matzen
North Wind Environmental, Inc.
545 Shoup Avenue
Idaho Falls, ID 83402
(208) 528-8718

Report Number: 0310117-1
Date Reported: 10/29/03
Work Order: 0310117
Lab Sample ID: 0310117-10A
Client Sample ID: S11WP2-03-CNF-A3
Date Collected: 10/17/03
Date Received: 10/17/03 16:00
Matrix: Soil
COC ID:

Project: TEAD SWMU 11
Project ID: TEAD SWMU 11
Purchase Order:

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
ASTM D2216-92: Moisture, Solid							
Percent Moisture	6.56	0.01	0.01	%	1	10/20/03	RH
SW-846 3050B: Flame/hrICP Prep, Solid							
Prep Batch ID: 12381					51	10/20/03 12:00	BBO
SW-846 6010B: Metals by hrICP (USACE), Solid							
Arsenic	3.42 J	1.61	8.11	mg/Kg	1	10/21/03 12:12	JMR
Lead	2.57 J	1.61	8.11	mg/Kg	1	10/21/03 12:12	JMR

Note for 10/21/03 12:12 analysis: Results are corrected for dry weight.

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

* - Result is greater than the associated action level

Client: Thomas Matzen
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Idaho Falls, ID 83402
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Report Number: 0310117-1
Date Reported: 10/29/03
Work Order: 0310117
Lab Sample ID: 0310117-11A
Client Sample ID: S11WP2-03-CNF-A4
Date Collected: 10/17/03
Date Received: 10/17/03 16:00
Matrix: Soil
COC ID:

Project: TEAD SWMU 11
Project ID: TEAD SWMU 11
Purchase Order:

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
ASTM D2216-92: Moisture, Solid							
Percent Moisture	5.95	0.01	0.01	%	1	10/20/03	RH
SW-846 3050B: Flame/hrICP Prep, Solid							
Prep Batch ID: 12381					52	10/20/03 12:00	BBO
SW-846 6010B: Metals by hrICP (USACE), Solid							
Arsenic	5.53 J	1.7	8.3	mg/Kg	1	10/21/03 12:16	JMR
Lead	7.12 J	1.7	8.3	mg/Kg	1	10/21/03 12:16	JMR

Note for 10/21/03 12:16 analysis: Results are corrected for dry weight.

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

* - Result is greater than the associated action level

Client: Thomas Matzen
North Wind Environmental, Inc.
545 Shoup Avenue
Idaho Falls, ID 83402
(208) 528-8718

Report Number: 0310117-1
Date Reported: 10/29/03
Work Order: 0310117
Lab Sample ID: 0310117-12A
Client Sample ID: S11WP2-03-CNF-A5
Date Collected: 10/17/03
Date Received: 10/17/03 16:00
Matrix: Soil
COC ID:

Project: TEAD SWMU 11
Project ID: TEAD SWMU 11
Purchase Order:

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
ASTM D2216-92: Moisture, Solid							
Percent Moisture	1.53	0.01	0.01	%	1	10/20/03	RH
SW-846 3050B: Flame/hrICP Prep, Solid							
Prep Batch ID: 12381					52	10/20/03 12:00	BBO
SW-846 6010B: Metals by hrICP (USACE), Solid							
Arsenic	3.96 J	1.52	7.85	mg/Kg	1	10/21/03 12:20	JMR
Lead	2.74 J	1.52	7.85	mg/Kg	1	10/21/03 12:20	JMR

Note for 10/21/03 12:20 analysis: Results are corrected for dry weight.

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

* - Result is greater than the associated action level

Client: Thomas Matzen
North Wind Environmental, Inc.
545 Shoup Avenue
Idaho Falls, ID 83402
(208) 528-8718

Report Number: 0310117-1
Date Reported: 10/29/03
Work Order: 0310117
Lab Sample ID: 0310117-13A
Client Sample ID: S11WP2-03-CNF-A6
Date Collected: 10/17/03
Date Received: 10/17/03 16:00
Matrix: Soil
COC ID:

Project: TEAD SWMU 11
Project ID: TEAD SWMU 11
Purchase Order:

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
ASTM D2216-92: Moisture, Solid							
Percent Moisture	5.49	0.01	0.01	%	1	10/20/03	RH
SW-846 3050B: Flame/hrICP Prep, Solid							
Prep Batch ID: 12381					50	10/20/03 12:00	BBO
SW-846 6010B: Metals by hrICP (USACE), Solid							
Arsenic	6.77 J	1.59	7.86	mg/Kg	1	10/21/03 12:25	JMR
Lead	10.3	1.59	7.86	mg/Kg	1	10/21/03 12:25	JMR

Note for 10/21/03 12:25 analysis: Results are corrected for dry weight.

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

* - Result is greater than the associated action level

Client: Thomas Matzen
North Wind Environmental, Inc.
545 Shoup Avenue
Idaho Falls, ID 83402
(208) 528-8718

Report Number: 0310117-1
Date Reported: 10/29/03
Work Order: 0310117
Lab Sample ID: 0310117-14A
Client Sample ID: S11WP2-03-CNF-A7
Date Collected: 10/17/03
Date Received: 10/17/03 16:00
Matrix: Soil
COC ID:

Project: TEAD SWMU 11
Project ID: TEAD SWMU 11
Purchase Order:

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
ASTM D2216-92: Moisture, Solid							
Percent Moisture	4.28	0.01	0.01	%	1	10/20/03	RH
SW-846 3050B: Flame/hrICP Prep, Solid							
Prep Batch ID: 12381					51	10/20/03 12:00	BBO
SW-846 6010B: Metals by hrICP (USACE), Solid							
Arsenic	3.24 J	1.57	7.92	mg/Kg	1	10/21/03 12:29	JMR
Lead	2.30 J	1.57	7.92	mg/Kg	1	10/21/03 12:29	JMR

Note for 10/21/03 12:29 analysis: Results are corrected for dry weight.

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

* - Result is greater than the associated action level

Client: Thomas Matzen
North Wind Environmental, Inc.
545 Shoup Avenue
Idaho Falls, ID 83402
(208) 528-8718

Report Number: 0310117-1
Date Reported: 10/29/03
Work Order: 0310117
Lab Sample ID: 0310117-15A
Client Sample ID: S11WP2-03-CNF-A8
Date Collected: 10/17/03
Date Received: 10/17/03 16:00
Matrix: Soil
COC ID:

Project: TEAD SWMU 11
Project ID: TEAD SWMU 11
Purchase Order:

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
ASTM D2216-92: Moisture, Solid							
Percent Moisture	1.88	0.01	0.01	%	1	10/20/03	RH
SW-846 3050B: Flame/hrICP Prep, Solid							
Prep Batch ID: 12381					51	10/20/03 12:00	BBO
SW-846 6010B: Metals by hrICP (USACE), Solid							
Arsenic	4.48 J	1.53	7.84	mg/Kg	1	10/21/03 12:33	JMR
Lead	2.24 J	1.53	7.84	mg/Kg	1	10/21/03 12:33	JMR

Note for 10/21/03 12:33 analysis: Results are corrected for dry weight.

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

* - Result is greater than the associated action level

Client: Thomas Matzen
North Wind Environmental, Inc.
545 Shoup Avenue
Idaho Falls, ID 83402
(208) 528-8718

Report Number: 0310117-1
Date Reported: 10/29/03
Work Order: 0310117
Lab Sample ID: 0310117-16A
Client Sample ID: S11WP3-03-CNF-A1
Date Collected: 10/17/03
Date Received: 10/17/03 16:00
Matrix: Soil
COC ID:

Project: TEAD SWMU 11
Project ID: TEAD SWMU 11
Purchase Order:

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
ASTM D2216-92: Moisture, Solid							
Percent Moisture	3.22	0.01	0.01	%	1	10/20/03	RH
SW-846 3050B: Flame/hrICP Prep, Solid							
Prep Batch ID: 12381					52	10/20/03 12:00	BBO
SW-846 6010B: Metals by hrICP (USACE), Solid							
Arsenic	5.89 J	1.55	7.99	mg/Kg	1	10/21/03 12:38	JMR
Lead	3.31 J	1.55	7.99	mg/Kg	1	10/21/03 12:38	JMR

Note for 10/21/03 12:38 analysis: Results are corrected for dry weight.

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

* - Result is greater than the associated action level

Client: Thomas Matzen
North Wind Environmental, Inc.
545 Shoup Avenue
Idaho Falls, ID 83402
(208) 528-8718

Report Number: 0310117-1
Date Reported: 10/29/03
Work Order: 0310117
Lab Sample ID: 0310117-17A
Client Sample ID: S11WP3-03-CNF-A2
Date Collected: 10/17/03
Date Received: 10/17/03 16:00
Matrix: Soil
COC ID:

Project: TEAD SWMU 11
Project ID: TEAD SWMU 11
Purchase Order:

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
ASTM D2216-92: Moisture, Solid							
Percent Moisture	2.60	0.01	0.01	%	1	10/20/03	RH
SW-846 3050B: Flame/hrICP Prep, Solid							
Prep Batch ID: 12381					51	10/20/03 12:00	BBO
SW-846 6010B: Metals by hrICP (USACE), Solid							
Arsenic	4.62 J	1.54	7.81	mg/Kg	1	10/21/03 12:51	JMR
Lead	3.18 J	1.54	7.81	mg/Kg	1	10/21/03 12:51	JMR

Note for 10/21/03 12:51 analysis: Results are corrected for dry weight.

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

* - Result is greater than the associated action level

Client: Thomas Matzen
North Wind Environmental, Inc.
545 Shoup Avenue
Idaho Falls, ID 83402
(208) 528-8718

Report Number: 0310117-1
Date Reported: 10/29/03
Work Order: 0310117
Lab Sample ID: 0310117-18A
Client Sample ID: S11WP3-03-CNF-A3
Date Collected: 10/17/03
Date Received: 10/17/03 16:00
Matrix: Soil
COC ID:

Project: TEAD SWMU 11
Project ID: TEAD SWMU 11
Purchase Order:

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
ASTM D2216-92: Moisture, Solid							
Percent Moisture	1.77	0.01	0.01	%	1	10/20/03	RH
SW-846 3050B: Flame/hrICP Prep, Solid							
Prep Batch ID: 12381					50	10/20/03 12:00	BBO
SW-846 6010B: Metals by hrICP (USACE), Solid							
Arsenic	3.26 J	1.53	7.68	mg/Kg	1	10/21/03 12:55	JMR
Lead	3.97 J	1.53	7.68	mg/Kg	1	10/21/03 12:55	JMR

Note for 10/21/03 12:55 analysis: Results are corrected for dry weight.

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

* - Result is greater than the associated action level

Client: Thomas Matzen
North Wind Environmental, Inc.
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Report Number: 0310117-1
Date Reported: 10/29/03
Work Order: 0310117
Lab Sample ID: 0310117-19A
Client Sample ID: S11WP3-03-CNF-A4
Date Collected: 10/17/03
Date Received: 10/17/03 16:00
Matrix: Soil
COC ID:

Project: TEAD SWMU 11
Project ID: TEAD SWMU 11
Purchase Order:

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
ASTM D2216-92: Moisture, Solid							
Percent Moisture	1.20	0.01	0.01	%	1	10/20/03	RH
SW-846 3050B: Flame/hrICP Prep, Solid							
Prep Batch ID: 12381					49	10/20/03 12:00	BBO
SW-846 6010B: Metals by hrICP (USACE), Solid							
Arsenic	4.45 J	1.52	7.48	mg/Kg	1	10/21/03 12:59	JMR
Lead	2.53 J	1.52	7.48	mg/Kg	1	10/21/03 12:59	JMR

Note for 10/21/03 12:59 analysis: Results are corrected for dry weight.

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

* - Result is greater than the associated action level

Client: Thomas Matzen
North Wind Environmental, Inc.
545 Shoup Avenue
Idaho Falls, ID 83402
(208) 528-8718

Report Number: 0310117-1
Date Reported: 10/29/03
Work Order: 0310117
Lab Sample ID: 0310117-20A
Client Sample ID: S11WP3-03-CNF-A5
Date Collected: 10/17/03
Date Received: 10/17/03 16:00
Matrix: Soil
COC ID:

Project: TEAD SWMU 11
Project ID: TEAD SWMU 11
Purchase Order:

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
ASTM D2216-92: Moisture, Solid							
Percent Moisture	3.51	0.01	0.01	%	1	10/20/03	RH
SW-846 3050B: Flame/hrICP Prep, Solid							
Prep Batch ID: 12381					51	10/20/03 12:00	BBO
SW-846 6010B: Metals by hrICP (USACE), Solid							
Arsenic	5.18 J	1.55	7.89	mg/Kg	1	10/21/03 13:04	JMR
Lead	3.11 J	1.55	7.89	mg/Kg	1	10/21/03 13:04	JMR

Note for 10/21/03 13:04 analysis: Results are corrected for dry weight.

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

* - Result is greater than the associated action level

Client: Thomas Matzen
North Wind Environmental, Inc.
545 Shoup Avenue
Idaho Falls, ID 83402
(208) 528-8718

Report Number: 0310117-1
Date Reported: 10/29/03
Work Order: 0310117
Lab Sample ID: 0310117-21A
Client Sample ID: S11WP3-03-CNF-A7
Date Collected: 10/17/03
Date Received: 10/17/03 16:00
Matrix: Water
COC ID:

Project: TEAD SWMU 11
Project ID: TEAD SWMU 11
Purchase Order:

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 3005A: Flame/hrICP Prep, Water							
Prep Batch ID: 12379						10/20/03 11:30	BBO
SW-846 6010B: Metals by hrICP (USACE), Water							
Arsenic	U	0.03	0.15	mg/L	1	10/28/03 17:26	JMR
Lead	U	0.03	0.15	mg/L	1	10/28/03 17:26	JMR

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

* - Result is greater than the associated action level



Quality Control Summary

Client: North Wind Environmental, Inc.
Project: TEAD SWMU 11
Project ID: TEAD SWMU 11

Report Number: 0310117-1
Date Reported: 10/29/03
Work Order: 0310117

ASTM D2216-92: Moisture, Solid

QC Type: Sample Duplicate
Sample ID: 0310108-07A DUP
Run ID: WC_031020J

Analysis Date: 10/20/03
Prep Batch ID: R39517

Units: %
Seq No: 491351

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD Limit
Percent Moisture	18.2						18.6	2.2 20

QC Type: Sample Duplicate
Sample ID: 0310117-01A DUP
Run ID: WC_031020J

Analysis Date: 10/20/03
Prep Batch ID: R39517

Units: %
Seq No: 491353

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD Limit
Percent Moisture	4.52						4.81	6.2 20

QC Type: Sample Duplicate
Sample ID: 0310117-08A DUP
Run ID: WC_031020J

Analysis Date: 10/20/03
Prep Batch ID: R39517

Units: %
Seq No: 491361

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD Limit
Percent Moisture	4.60						4.74	3.0 20

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

NC - Not Calculated: Duplicate value(s) are less than the MDL



Quality Control Summary

Client: North Wind Environmental, Inc.
Project: TEAD SWMU 11
Project ID: TEAD SWMU 11

Report Number: 0310117-1
Date Reported: 10/29/03
Work Order: 0310117

QC Type: Sample Duplicate
Sample ID: 0310117-18A DUP
Run ID: WC_031020J

Analysis Date: 10/20/03
Prep Batch ID: R39517

Units: %
Seq No: 491372

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD Limit
Percent Moisture	1.65						1.77	7.0 20

QC Type: Sample Duplicate
Sample ID: 0310117-20A DUP
Run ID: WC_031020J

Analysis Date: 10/20/03
Prep Batch ID: R39517

Units: %
Seq No: 491375

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD Limit
Percent Moisture	3.46						3.51	1.4 20

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

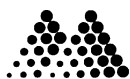
S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

NC - Not Calculated: Duplicate value(s) are less than the MDL



Quality Control Summary

Client: North Wind Environmental, Inc.
Project: TEAD SWMU 11
Project ID: TEAD SWMU 11

Report Number: 0310117-1
Date Reported: 10/29/03
Work Order: 0310117

SW-846 6010B: Metals by hrICP (USACE), Solid

QC Type: Method Blank
Sample ID: PBW-12381
Run ID: TJA-IRIS_031021B

Analysis Date: 10/21/03 11:15
Prep Batch ID: 12381

Units: mg/Kg
Seq No: 491450

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD Limit
Arsenic	0.0096	0	0	0	-0.06	0.03		
Lead	-0.0028	0	0	0	-0.06	0.03		

QC Type: Laboratory Control Sample (Water)
Sample ID: LCSW-12381
Run ID: TJA-IRIS_031021B

Analysis Date: 10/21/03 11:19
Prep Batch ID: 12381

Units: mg/Kg
Seq No: 491451

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD Limit
Arsenic	96.8		100	96.8	80	120		
Lead	90.2		100	90.2	80	120		

QC Type: Sample Duplicate
Sample ID: 0310117-08A D
Run ID: TJA-IRIS_031021B

Analysis Date: 10/21/03 11:26
Prep Batch ID: 12381

Units: mg/Kg
Seq No: 491453

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD Limit
Arsenic	3.9J						4.0 J	2.6 35
Lead	2.2J						2.3 J	6.2 35

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

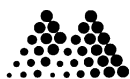
S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

NC - Not Calculated: Duplicate value(s) are less than the MDL



Quality Control Summary

Client: North Wind Environmental, Inc.
Project: TEAD SWMU 11
Project ID: TEAD SWMU 11

Report Number: 0310117-1
Date Reported: 10/29/03
Work Order: 0310117

QC Type: Matrix Spike
Sample ID: 0310117-08A MS
Run ID: TJA-IRIS_031021B

Analysis Date: 10/21/03 11:30
Prep Batch ID: 12381

Units: mg/Kg
Seq No: 491454

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD Limit
Arsenic	54.5	4.0 J	51.0	98.9	75	125		
Lead	47.2	2.3 J	51.0	88.0	75	125		

QC Type: Matrix Spike Duplicate
Sample ID: 0310117-08A MSD
Run ID: TJA-IRIS_031021B

Analysis Date: 10/21/03 11:33
Prep Batch ID: 12381

Units: mg/Kg
Seq No: 491455

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD Limit
Arsenic	45.5	4.0 J	50.0	82.9	75	125	54.5	18 35
Lead	40.2	2.3 J	50.0	75.7	75	125	47.2	16 35

QC Type: Post Digestion/Distillation Spike
Sample ID: 0310117-08A A
Run ID: TJA-IRIS_031021B

Analysis Date: 10/21/03 11:38
Prep Batch ID: 12381

Units: mg/Kg
Seq No: 491456

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD Limit
Arsenic	55.8	4.0 J	50.3	103	75	125		
Lead	47.9	2.3 J	50.3	90.7	75	125		

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

NC - Not Calculated: Duplicate value(s) are less than the MDL



Quality Control Summary

Client: North Wind Environmental, Inc.
Project: TEAD SWMU 11
Project ID: TEAD SWMU 11

Report Number: 0310117-1
Date Reported: 10/29/03
Work Order: 0310117

QC Type: Serial Dilution
Sample ID: 0310117-08A L
Run ID: TJA-IRIS_031021B

Analysis Date: 10/21/03 11:43
Prep Batch ID: 12381

Units: mg/Kg
Seq No: 491457

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	%D	Limit
Arsenic	U						4.0 J	NC	10
Lead	U						2.3 J	NC	10

QC Type: Method Blank
Sample ID: PBW-12381
Run ID: TJA-IRIS_031020C

Analysis Date: 10/20/03 17:38
Prep Batch ID: 12381

Units: mg/Kg
Seq No: 491512

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Arsenic	-0.0048	0	0	0	-0.06	0.03			
Lead	0.012	0	0	0	-0.06	0.03			

QC Type: Laboratory Control Sample (Water)
Sample ID: LCSW-12381
Run ID: TJA-IRIS_031020C

Analysis Date: 10/20/03 17:42
Prep Batch ID: 12381

Units: mg/Kg
Seq No: 491513

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Arsenic	95.4		100	95.4	75	125			
Lead	93.8		100	93.8	75	125			

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

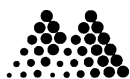
S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

NC - Not Calculated: Duplicate value(s) are less than the MDL



Quality Control Summary

Client: North Wind Environmental, Inc.
Project: TEAD SWMU 11
Project ID: TEAD SWMU 11

Report Number: 0310117-1
Date Reported: 10/29/03
Work Order: 0310117

QC Type: Sample Duplicate
Sample ID: 0310117-08A D
Run ID: TJA-IRIS_031020C

Analysis Date: 10/20/03 17:50
Prep Batch ID: 12381

Units: mg/Kg
Seq No: 491515

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD Limit
Arsenic	2.1 JR(3a)						3.6 J	54
Lead	2.6 JR(3a)						1.9 J	31

3a: Duplicates not evaluated - matrix sample <10x the detection limit

QC Type: Matrix Spike
Sample ID: 0310117-08A MS
Run ID: TJA-IRIS_031020C

Analysis Date: 10/20/03 17:54
Prep Batch ID: 12381

Units: mg/Kg
Seq No: 491516

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD Limit
Arsenic	53.5	3.6 J	51.0	97.7	75	125		
Lead	48.3	1.9 J	51.0	90.9	75	125		

QC Type: Matrix Spike Duplicate
Sample ID: 0310117-08A MSD
Run ID: TJA-IRIS_031020C

Analysis Date: 10/20/03 17:57
Prep Batch ID: 12381

Units: mg/Kg
Seq No: 491517

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD Limit
Arsenic	44.7	3.6 J	50.0	82.0	75	125	53.5	18
Lead	40.8	1.9 J	50.0	77.7	75	125	48.3	17

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

NC - Not Calculated: Duplicate value(s) are less than the MDL



Quality Control Summary

Client: North Wind Environmental, Inc.
Project: TEAD SWMU 11
Project ID: TEAD SWMU 11

Report Number: 0310117-1
Date Reported: 10/29/03
Work Order: 0310117

QC Type: Post Digestion/Distillation Spike
Sample ID: 0310117-08A A
Run ID: TJA-IRIS_031020C

Analysis Date: 10/20/03 18:02
Prep Batch ID: 12381

Units: mg/Kg
Seq No: 491518

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD Limit
Arsenic	53.9	3.6 J	50.3	100	75	125		
Lead	48.6	1.9 J	50.3	92.8	75	125		

QC Type: Serial Dilution
Sample ID: 0310117-08A L
Run ID: TJA-IRIS_031020C

Analysis Date: 10/20/03 18:07
Prep Batch ID: 12381

Units: mg/Kg
Seq No: 491519

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	%D	Limit
Arsenic	U						3.6 J	NC	10
Lead	U						1.9 J	NC	10

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

NC - Not Calculated: Duplicate value(s) are less than the MDL

**Quality Control Summary**

Client: North Wind Environmental, Inc.
Project: TEAD SWMU 11
Project ID: TEAD SWMU 11

Report Number: 0310117-1
Date Reported: 10/29/03
Work Order: 0310117

QC Type: Method Blank
Sample ID: PBW-12379
Run ID: TJA-IRIS_031021A

Analysis Date: 10/21/03 15:43
Prep Batch ID: 12379

Units: mg/L
Seq No: 491656

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD Limit
Antimony	0.0081	0	0	0	-0.06	0.03		
Arsenic	0.0094	0	0	0	-0.06	0.03		
Barium	0.00027	0	0	0	-0.006	0.003		
Cadmium	0.00038	0	0	0	-0.006	0.003		
Chromium	0.00010	0	0	0	-0.02	0.01		
Lead	0.0097	0	0	0	-0.06	0.03		
Selenium	-0.020	0	0	0	-0.1	0.05		
Silver	0.00047	0	0	0	-0.006	0.003		
Thallium	-0.0025	0	0	0	-0.1	0.05		

QC Type: Laboratory Control Sample (Water)
Sample ID: LCSW-12379
Run ID: TJA-IRIS_031021A

Analysis Date: 10/21/03 15:47
Prep Batch ID: 12379

Units: mg/L
Seq No: 491657

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD Limit
Antimony	1.01		1.00	101	75	125		
Arsenic	1.01		1.00	101	75	125		
Barium	0.202		0.200	101	75	125		
Cadmium	0.0978		0.100	97.8	75	125		
Chromium	0.397		0.400	99.3	75	125		
Lead	0.974		1.00	97.4	75	125		
Selenium	0.999		1.00	99.9	75	125		
Silver	0.104		0.100	104	75	125		
Thallium	0.963		1.00	96.3	75	125		

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S -Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

NC - Not Calculated: Duplicate value(s) are less than the MDL



Quality Control Summary

Client: North Wind Environmental, Inc.
Project: TEAD SWMU 11
Project ID: TEAD SWMU 11

Report Number: 0310117-1
Date Reported: 10/29/03
Work Order: 0310117

QC Type: Sample Duplicate
Sample ID: 0310083-01F D
Run ID: TJA-IRIS_031021A

Analysis Date: 10/21/03 15:55
Prep Batch ID: 12379

Units: mg/L
Seq No: 491659

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD Limit
Antimony	0.035 J						U	NC
Arsenic	0.038 J						0.035 J	6.6
Barium	0.0242						0.0246	1.6
Cadmium	0.013 J						0.013 J	2.3
Chromium	0.0669						0.0638	4.8
Lead	0.094 J						0.095 J	1.6
Selenium	U						U	NC
Silver	0.0938						0.0983	4.8
Thallium	U						U	NC

QC Type: Matrix Spike
Sample ID: 0310083-01F MS
Run ID: TJA-IRIS_031021A

Analysis Date: 10/21/03 15:59
Prep Batch ID: 12379

Units: mg/L
Seq No: 491660

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD Limit
Antimony	1.10	U	1.00	110	75	125		
Arsenic	1.17	0.035 J	1.00	113	75	125		
Barium	0.220	0.0246	0.200	97.6	75	125		
Cadmium	0.113	0.013 J	0.100	100	75	125		
Chromium	0.458	0.0638	0.400	98.7	75	125		
Lead	1.10	0.095 J	1.00	100	75	125		
Selenium	1.13	U	1.00	113	75	125		
Silver	0.131 S(2n)	0.0983	0.100	32.2	75	125		
Thallium	0.901	U	1.00	90.1	75	125		

2n: MS/MSD and/or RPD are outside acceptable limits - PDS is within limits - matrix interference suspected

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

NC - Not Calculated: Duplicate value(s) are less than the MDL



Quality Control Summary

Client: North Wind Environmental, Inc.
Project: TEAD SWMU 11
Project ID: TEAD SWMU 11

Report Number: 0310117-1
Date Reported: 10/29/03
Work Order: 0310117

QC Type: Matrix Spike Duplicate
Sample ID: 0310083-01F MSD
Run ID: TJA-IRIS_031021A

Analysis Date: 10/21/03 16:02
Prep Batch ID: 12379

Units: mg/L
Seq No: 491661

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Antimony	1.11	U	1.00	111	75	125	1.10	0.33	20
Arsenic	1.15	0.035 J	1.00	112	75	125	1.17	1.6	20
Barium	0.226	0.0246	0.200	101	75	125	0.220	2.8	20
Cadmium	0.112	0.013 J	0.100	98.6	75	125	0.113	1.6	20
Chromium	0.453	0.0638	0.400	97.2	75	125	0.458	1.3	20
Lead	1.12	0.095 J	1.00	102	75	125	1.10	2.0	20
Selenium	1.14	U	1.00	114	75	125	1.13	0.68	20
Silver	0.168SR(2n)	0.0983	0.100	69.7	75	125	0.131	25	20
Thallium	0.961	U	1.00	96.1	75	125	0.901	6.4	20

2n: MS/MSD and/or RPD are outside acceptable limits - PDS is within limits - matrix interference suspected

QC Type: Post Digestion/Distillation Spike
Sample ID: 0310083-01F A
Run ID: TJA-IRIS_031021A

Analysis Date: 10/21/03 16:06
Prep Batch ID: 12379

Units: mg/L
Seq No: 491662

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Antimony	1.07	U	1.00	107	75	125			
Arsenic	1.15	0.035 J	1.00	112	75	125			
Barium	0.228	0.0246	0.200	102	75	125			
Cadmium	0.112	0.013 J	0.100	98.7	75	125			
Chromium	0.440	0.0638	0.400	94.1	75	125			
Lead	1.12	0.095 J	1.00	102	75	125			
Selenium	1.14	U	1.00	114	75	125			
Silver	0.190	0.0983	0.100	91.7	75	125			
Thallium	0.962	U	1.00	96.2	75	125			

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S -Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

NC - Not Calculated: Duplicate value(s) are less than the MDL



Quality Control Summary

Client: North Wind Environmental, Inc.
Project: TEAD SWMU 11
Project ID: TEAD SWMU 11

Report Number: 0310117-1
Date Reported: 10/29/03
Work Order: 0310117

QC Type: Serial Dilution
Sample ID: 0310083-01F L
Run ID: TJA-IRIS_031021A

Analysis Date: 10/21/03 16:12
Prep Batch ID: 12379

Units: mg/L
Seq No: 491663

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	%D	Limit
Antimony	U						U	NC	10
Arsenic	U						0.035 J	NC	10
Barium	0.028 JR(6a)						0.025 J	16	10
Cadmium	0.016 JR(6a)						0.013 J	19	10
Chromium	0.066 J						0.064 J	2.9	10
Lead	U						0.095 J	NC	10
Selenium	U						U	NC	10
Silver	0.0875 R(6a)						0.0983	11	10
Thallium	U						U	NC	10

6a: Serial dilution not evaluated - result <10x the detection limit

QC Type: Method Blank
Sample ID: PBW-12379
Run ID: TJA-IRIS_031028B

Analysis Date: 10/28/03 16:45
Prep Batch ID: 12379

Units: mg/L
Seq No: 493050

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD Limit
Arsenic	0.018	0	0	0	-0.06	0.03		
Lead	0.00054	0	0	0	-0.06	0.03		

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

NC - Not Calculated: Duplicate value(s) are less than the MDL



Quality Control Summary

Client: North Wind Environmental, Inc.
Project: TEAD SWMU 11
Project ID: TEAD SWMU 11

Report Number: 0310117-1
Date Reported: 10/29/03
Work Order: 0310117

QC Type: Laboratory Control Sample (Water)
Sample ID: LCSW-12379
Run ID: TJA-IRIS_031028B

Analysis Date: 10/28/03 16:49
Prep Batch ID: 12379

Units: mg/L
Seq No: 493051

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD Limit
Arsenic	0.985		1.00	98.5	80	120		
Lead	0.988		1.00	98.8	80	120		

QC Type: Sample Duplicate
Sample ID: 0310083-01F D
Run ID: TJA-IRIS_031028B

Analysis Date: 10/28/03 16:59
Prep Batch ID: 12379

Units: mg/L
Seq No: 493053

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD Limit
Arsenic	U						U	NC 20
Lead	0.079J						0.076 J	3.9 20

QC Type: Matrix Spike
Sample ID: 0310083-01F MS
Run ID: TJA-IRIS_031028B

Analysis Date: 10/28/03 17:02
Prep Batch ID: 12379

Units: mg/L
Seq No: 493054

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD Limit
Arsenic	1.18	U	1.00	118	80	120		
Lead	1.12	0.076 J	1.00	105	80	120		

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

NC - Not Calculated: Duplicate value(s) are less than the MDL



Quality Control Summary

Client: North Wind Environmental, Inc.
Project: TEAD SWMU 11
Project ID: TEAD SWMU 11

Report Number: 0310117-1
Date Reported: 10/29/03
Work Order: 0310117

QC Type: Matrix Spike Duplicate
Sample ID: 0310083-01F MSD
Run ID: TJA-IRIS_031028B

Analysis Date: 10/28/03 17:06
Prep Batch ID: 12379

Units: mg/L
Seq No: 493055

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Arsenic	1.18	U	1.00	118	80	120	1.18	0.40	20
Lead	1.10	0.076 J	1.00	102	80	120	1.12	2.1	20

QC Type: Post Digestion/Distillation Spike
Sample ID: 0310083-01F A
Run ID: TJA-IRIS_031028B

Analysis Date: 10/28/03 17:12
Prep Batch ID: 12379

Units: mg/L
Seq No: 493056

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Arsenic	1.13	U	1.00	113	75	125			
Lead	1.11	0.076 J	1.00	103	75	125			

QC Type: Serial Dilution
Sample ID: 0310083-01F L
Run ID: TJA-IRIS_031028B

Analysis Date: 10/28/03 17:17
Prep Batch ID: 12379

Units: mg/L
Seq No: 493057

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	%D	%D Limit
Arsenic	U						U	NC	10
Lead	U						0.076 J	NC	10

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

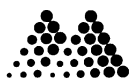
S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

NC - Not Calculated: Duplicate value(s) are less than the MDL

**Quality Control Summary**

Client: North Wind Environmental, Inc.
Project: TEAD SWMU 11
Project ID: TEAD SWMU 11

Report Number: 0310117-1
Date Reported: 10/29/03
Work Order: 0310117

SW-846 8270C: Semi-Volatiles (USACE), Solid

QC Type: Method Blank
Sample ID: MB-12380
Run ID: HP-5_031020A

Analysis Date: 10/20/03 18:33
Prep Batch ID: 12380

Units: µg/Kg
Seq No: 491163

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD Limit
Benz(a)anthracene	U	0	0	0		40		
Benzo(b)fluoranthene	U	0	0	0		80		
bis(2-Ethylhexyl)phthalate	U	0	0	0		60		
Surrogates								
2,4,6-Tribromophenol	6850	0	6640	103	59	112		
2-Fluorophenol	5200	0	6640	78.3	52	96		
2-Fluorobiphenyl	2530	0	3330	76.0	44	92		
Nitrobenzene-d5	2760	0	3400	81.2	46	100		
Phenol-d6	5070	0	6740	75.2	52	91		
Terphenyl-d14	2690	0	3400	79.1	43	111		

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

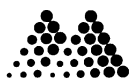
S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

NC - Not Calculated: Duplicate value(s) are less than the MDL

**Quality Control Summary**

Client: North Wind Environmental, Inc.
Project: TEAD SWMU 11
Project ID: TEAD SWMU 11

Report Number: 0310117-1
Date Reported: 10/29/03
Work Order: 0310117

QC Type: Laboratory Control Spike
Sample ID: LCS-12380
Run ID: HP-5_031020A

Analysis Date: 10/20/03 19:04
Prep Batch ID: 12380

Units: µg/Kg
Seq No: 491165

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD Limit
Acenaphthene	2810		3330	84.3	60	140		
4-Chloro-3-methylphenol	3010		3330	90.4	60	140		
2-Chlorophenol	2990		3330	89.8	60	140		
1,4-Dichlorobenzene	2660		3330	79.9	60	140		
2,4-Dinitrotoluene	3250		3330	97.5	45	140		
N-Nitrosodi-N-propylamine	2750		3330	82.7	45	140		
4-Nitrophenol	2970		3330	89.0	60	140		
Pentachlorophenol	3360		3330	101	45	140		
Phenol	2870		3330	86.2	60	140		
Pyrene	3370		3330	101	60	140		
1,2,4-Trichlorobenzene	2970		3330	89.1	60	140		
Surrogates								
2,4,6-Tribromophenol	7870		6640	118	45	135		
2-Fluorophenol	5640		6640	84.9	45	135		
2-Fluorobiphenyl	2960		3330	88.9	45	135		
Nitrobenzene-d5	3080		3400	90.5	45	135		
Phenol-d6	5550		6740	82.4	45	135		
Terphenyl-d14	2940		3400	86.4	45	135		

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

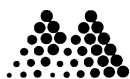
S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

NC - Not Calculated: Duplicate value(s) are less than the MDL

**Quality Control Summary**

Client: North Wind Environmental, Inc.
Project: TEAD SWMU 11
Project ID: TEAD SWMU 11

Report Number: 0310117-1
Date Reported: 10/29/03
Work Order: 0310117

QC Type: Matrix Spike
Sample ID: 0310117-01AMS
Run ID: HP-5_031020A

Analysis Date: 10/20/03 21:06
Prep Batch ID: 12380

Units: µg/Kg
Seq No: 491169

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD Limit
Acenaphthene	2610	U	3330	78.5	60	140		
4-Chloro-3-methylphenol	2970	U	3330	89.3	60	140		
2-Chlorophenol	2800	U	3330	84.0	60	140		
1,4-Dichlorobenzene	2410	U	3330	72.3	60	140		
2,4-Dinitrotoluene	3100	U	3330	93.0	45	140		
N-Nitrosodi-N-propylamine	2590	U	3330	77.8	45	140		
4-Nitrophenol	2960	U	3330	89.0	60	140		
Pentachlorophenol	3230	U	3330	96.9	45	140		
Phenol	2700	U	3330	81.1	60	140		
Pyrene	3640	U	3330	109	60	140		
1,2,4-Trichlorobenzene	2750	U	3330	82.6	60	140		
Surrogates								
2,4,6-Tribromophenol	7900	0	6640	119	45	135		
2-Fluorophenol	5270	0	6640	79.4	45	135		
2-Fluorobiphenyl	2770	0	3330	83.2	45	135		
Nitrobenzene-d5	2860	0	3400	84.1	45	135		
Phenol-d6	5260	0	6740	78.1	45	135		
Terphenyl-d14	3280	0	3400	96.6	45	135		

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

NC - Not Calculated: Duplicate value(s) are less than the MDL

**Quality Control Summary**

Client: North Wind Environmental, Inc.
Project: TEAD SWMU 11
Project ID: TEAD SWMU 11

Report Number: 0310117-1
Date Reported: 10/29/03
Work Order: 0310117

QC Type: Matrix Spike Duplicate
Sample ID: 0310117-01AMSD
Run ID: HP-5_031020A

Analysis Date: 10/20/03 21:37
Prep Batch ID: 12380

Units: µg/Kg
Seq No: 491171

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Acenaphthene	2600	U	3330	78.1	60	140	2610	0.43	30
4-Chloro-3-methylphenol	3030	U	3330	90.9	60	140	2970	1.8	30
2-Chlorophenol	2780	U	3330	83.6	60	140	2800	0.54	30
1,4-Dichlorobenzene	2320	U	3330	69.7	60	140	2410	3.7	30
2,4-Dinitrotoluene	3340	U	3330	100	45	140	3100	7.6	30
N-Nitrosodi-N-propylamine	2560	U	3330	77.0	45	140	2590	1.1	30
4-Nitrophenol	3260	U	3330	97.8	60	140	2960	9.4	30
Pentachlorophenol	3490	U	3330	105	45	140	3230	8.0	30
Phenol	2680	U	3330	80.5	60	140	2700	0.77	30
Pyrene	3830	U	3330	115	60	140	3640	5.1	30
1,2,4-Trichlorobenzene	2670	U	3330	80.1	60	140	2750	3.1	30
Surrogates									
2,4,6-Tribromophenol	8850	0	6640	133	45	135			
2-Fluorophenol	5270	0	6640	79.4	45	135			
2-Fluorobiphenyl	2740	0	3330	82.2	45	135			
Nitrobenzene-d5	2840	0	3400	83.4	45	135			
Phenol-d6	5300	0	6740	78.6	45	135			
Terphenyl-d14	3440	0	3400	101	45	135			

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

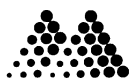
S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

NC - Not Calculated: Duplicate value(s) are less than the MDL



Quality Control Summary

Client: North Wind Environmental, Inc.
Project: TEAD SWMU 11
Project ID: TEAD SWMU 11

Report Number: 0310117-1
Date Reported: 10/29/03
Work Order: 0310117

QC Type: Method Blank
Sample ID: MB-12380
Run ID: HP-5_031020B

Analysis Date: 10/20/03 18:33
Prep Batch ID: 12380

Units: µg/Kg
Seq No: 491186

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD Limit
Acenaphthene	U	0	0	0		80		
Acenaphthylene	U	0	0	0		70		
Anthracene	U	0	0	0		80		
Benz(a)anthracene	U	0	0	0		70		
Benzo(a)pyrene	U	0	0	0		70		
Benzo(b)fluoranthene	U	0	0	0		70		
Benzo(ghi)perylene	U	0	0	0		60		
Benzo(k)fluoranthene	U	0	0	0		90		
Benzoic acid	U	0	0	0		200		
Benzyl alcohol	U	0	0	0		200		
bis(2-Chloroethoxy)methane	U	0	0	0		80		
bis(2-Chloroethyl)ether	U	0	0	0		200		
bis(2-Chloroisopropyl)ether	U	0	0	0		100		
bis(2-Ethylhexyl)phthalate	U	0	0	0		100		
4-Bromophenyl-phenyl ether	U	0	0	0		80		
Butylbenzyl phthalate	U	0	0	0		80		
4-Chloro-3-methylphenol	U	0	0	0		200		
p-Chloroaniline	U	0	0	0		90		
2-Chloronaphthalene	U	0	0	0		70		
2-Chlorophenol	U	0	0	0		300		
4-Chlorophenyl-phenyl ether	U	0	0	0		80		
Chrysene	U	0	0	0		70		
Di-N-butyl phthalate	U	0	0	0		110		
Di-N-octyl phthalate	U	0	0	0		90		
Dibenz(a,h)anthracene	U	0	0	0		100		
Dibenzofuran	U	0	0	0		80		
Diethyl phthalate	U	0	0	0		80		
1,2-Dichlorobenzene	U	0	0	0		200		
1,3-Dichlorobenzene	U	0	0	0		200		
1,4-Dichlorobenzene	U	0	0	0		200		
3,3'-Dichlorobenzidine	U	0	0	0		110		

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

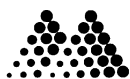
S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

NC - Not Calculated: Duplicate value(s) are less than the MDL



Quality Control Summary

Client: North Wind Environmental, Inc.

Project: TEAD SWMU 11

Project ID: TEAD SWMU 11

Report Number: 0310117-1

Date Reported: 10/29/03

Work Order: 0310117

2,4-Dichlorophenol	U	0	0	0	200
Dimethyl phthalate	U	0	0	0	70
2,4-Dimethylphenol	U	0	0	0	200
4,6-Dinitro-2-methylphenol	U	0	0	0	200
2,4-Dinitrophenol	U	0	0	0	200
2,4-Dinitrotoluene	U	0	0	0	80
2,6-Dinitrotoluene	U	0	0	0	50
Fluoranthene	U	0	0	0	80
Fluorene	U	0	0	0	90
Hexachlorobenzene	U	0	0	0	70
Hexachlorobutadiene	U	0	0	0	200
Hexachlorocyclopentadiene	U	0	0	0	70
Hexachloroethane	U	0	0	0	200
Indeno(1,2,3-cd)pyrene	U	0	0	0	70
Isophorone	U	0	0	0	90
2-Methylnaphthalene	U	0	0	0	80
2-Methylphenol (o-Cresol)	U	0	0	0	200
3 and 4- Methylphenol (m+p cresol)	U	0	0	0	200
N-Nitrosodiphenylamine	U	0	0	0	90
N-Nitrosodi-N-propylamine	U	0	0	0	90
Naphthalene	U	0	0	0	100
2-Nitroaniline	U	0	0	0	80
3-Nitroaniline	U	0	0	0	70
4-Nitroaniline	U	0	0	0	70
Nitrobenzene	U	0	0	0	100
2-Nitrophenol	U	0	0	0	300
4-Nitrophenol	U	0	0	0	200
Pentachlorophenol	U	0	0	0	300
Phenanthrene	U	0	0	0	80
Phenol	U	0	0	0	200
Pyrene	U	0	0	0	80
1,2,4-Trichlorobenzene	U	0	0	0	200
2,4,5-Trichlorophenol	U	0	0	0	200
2,4,6-Trichlorophenol	U	0	0	0	200

Surrogates

2,4,6-Tribromophenol	6850	0	6670	103	49	132
2-Fluorophenol	5200	0	6670	77.9	58	93

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S -Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

NC - Not Calculated: Duplicate value(s) are less than the MDL

**Quality Control Summary**

Client: North Wind Environmental, Inc.
Project: TEAD SWMU 11
Project ID: TEAD SWMU 11

Report Number: 0310117-1
Date Reported: 10/29/03
Work Order: 0310117

2-Fluorobiphenyl	2530	0	3330	76.0	59	93
Nitrobenzene-d5	2760	0	3330	82.9	61	97
Phenol-d6	5070	0	6670	76.0	59	90
Terphenyl-d14	2690	0	3330	80.7	57	132

QC Type: Laboratory Control Spike
Sample ID: LCS-12380
Run ID: HP-5_031020B

Analysis Date: 10/20/03 19:04
Prep Batch ID: 12380

Units: µg/Kg
Seq No: 491187

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD Limit
Acenaphthene	2810		3330	84.3	59	95		
4-Chloro-3-methylphenol	3010		3330	90.4	67	108		
2-Chlorophenol	2990		3330	89.8	63	94		
1,4-Dichlorobenzene	2660		3330	79.9	55	85		
2,4-Dinitrotoluene	3250		3330	97.5	68	118		
N-Nitrosodi-N-propylamine	2750		3330	82.7	58	89		
4-Nitrophenol	2970		3330	89.0	63	125		
Pentachlorophenol	3360		3330	101	63	132		
Phenol	2870		3330	86.2	58	98		
Pyrene	3370		3330	101	55	114		
1,2,4-Trichlorobenzene	2970 S(8a)		3330	89.1	56	88		
Surrogates								
2,4,6-Tribromophenol	7870		6670	118	49	132		
2-Fluorophenol	5640		6670	84.5	58	93		
2-Fluorobiphenyl	2960		3330	88.9	59	93		
Nitrobenzene-d5	3080		3330	92.4	61	97		
Phenol-d6	5550		6670	83.3	59	90		
Terphenyl-d14	2940		3330	88.2	57	132		

8a: See sample comments.

Sample Comments: LCS has surrogate and spike recovery slightly above QC limits, which may indicate a high bias.

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

NC - Not Calculated: Duplicate value(s) are less than the MDL

**Quality Control Summary**

Client: North Wind Environmental, Inc.
Project: TEAD SWMU 11
Project ID: TEAD SWMU 11

Report Number: 0310117-1
Date Reported: 10/29/03
Work Order: 0310117

QC Type: Matrix Spike
Sample ID: 0310117-01AMS
Run ID: HP-5_031020B

Analysis Date: 10/20/03 21:06
Prep Batch ID: 12380

Units: µg/Kg
Seq No: 491189

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD Limit
Acenaphthene	2610	U	3330	78.5	59	95		
4-Chloro-3-methylphenol	2970	U	3330	89.3	67	108		
2-Chlorophenol	2800	U	3330	84.0	63	94		
1,4-Dichlorobenzene	2410	U	3330	72.3	55	85		
2,4-Dinitrotoluene	3100	U	3330	93.0	68	118		
N-Nitrosodi-N-propylamine	2590	U	3330	77.8	58	89		
4-Nitrophenol	2960	U	3330	89.0	63	125		
Pentachlorophenol	3230	U	3330	96.9	63	132		
Phenol	2700	U	3330	81.1	58	98		
Pyrene	3640	U	3330	109	55	114		
1,2,4-Trichlorobenzene	2750	U	3330	82.6	56	88		
Surrogates								
2,4,6-Tribromophenol	7900	0	6670	118	49	132		
2-Fluorophenol	5270	0	6670	79.0	58	93		
2-Fluorobiphenyl	2770	0	3330	83.2	59	93		
Nitrobenzene-d5	2860	0	3330	85.9	61	97		
Phenol-d6	5260	0	6670	78.9	59	90		
Terphenyl-d14	3280	0	3330	98.6	57	132		

Sample Comments: MS has a spike recovery slightly above QC limits, which may indicate a high bias.

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

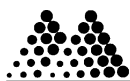
S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

NC - Not Calculated: Duplicate value(s) are less than the MDL



Quality Control Summary

Client: North Wind Environmental, Inc.
Project: TEAD SWMU 11
Project ID: TEAD SWMU 11

Report Number: 0310117-1
Date Reported: 10/29/03
Work Order: 0310117

QC Type: Matrix Spike Duplicate
Sample ID: 0310117-01AMSD
Run ID: HP-5_031020B

Analysis Date: 10/20/03 21:37
Prep Batch ID: 12380

Units: µg/Kg
Seq No: 491190

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Acenaphthene	2600	U	3330	78.1	59	95	2610	0.43	28
4-Chloro-3-methylphenol	3030	U	3330	90.9	67	108	2970	1.8	37
2-Chlorophenol	2780	U	3330	83.6	63	94	2800	0.54	29
1,4-Dichlorobenzene	2320	U	3330	69.7	55	85	2410	3.7	32
2,4-Dinitrotoluene	3340	U	3330	100	68	118	3100	7.6	22
N-Nitrosodi-N-propylamine	2560	U	3330	77.0	58	89	2590	1.1	55
4-Nitrophenol	3260	U	3330	97.8	63	125	2960	9.4	47
Pentachlorophenol	3490	U	3330	105	63	132	3230	8.0	49
Phenol	2680	U	3330	80.5	58	98	2700	0.77	23
Pyrene	3830 S(8a)	U	3330	115	55	114	3640	5.1	25
1,2,4-Trichlorobenzene	2670	U	3330	80.1	56	88	2750	3.1	28
Surrogates									
2,4,6-Tribromophenol	8850 S(8a)	0	6670	133	49	132			
2-Fluorophenol	5270	0	6670	79.0	58	93			
2-Fluorobiphenyl	2740	0	3330	82.2	59	93			
Nitrobenzene-d5	2840	0	3330	85.2	61	97			
Phenol-d6	5300	0	6670	79.5	59	90			
Terphenyl-d14	3440	0	3330	103	57	132			

8a: See sample comments.

Sample Comments: MSD has a surrogate recovery slightly above QC limits, which may indicate a high bias.

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

NC - Not Calculated: Duplicate value(s) are less than the MDL



North Wind, Inc.
Generic Chain of Custody

Reference Case SOW# 03-001
Client No:
SDG No:

Date Shipped: Carrier Name: By Hand Airbill: Shipped to: Mountain States Analytical, L.C. Salt Lake City UT 0 -	Chain of Custody Record		Sampler Signature: <i>[Signature]</i>
	Relinquished By	(Date / Time)	Received By
	1 <i>[Signature]</i>	10-17-03/1600	10-17-03/1600
	2		
3			
4			
For Lab Use Only			Lab Contract No: _____
Unit Price: _____			Transfer To: _____
Lab Contract No: _____			Unit Price: _____

						FOR LAB USE ONLY	
						Sample Condition On Receipt	
SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME	
S11LP-03-CNF- Soil (0"-12") A1 (MS/MSD)	/G	SVOC 8270C (1)	(Ice Only) (1)		S11LP-03-CNF-A1	S: 10/17/2003/ 1215	SWMULL - CS-01
S11LP-03-CNF- Soil (0"-12") A2	/G	SVOC 8270C (1)	(Ice Only) (1)		S11LP-03-CNF-A2	S: 10/17/2003/ 1224	SWMULL - CS-02
S11LP-03-CNF- Soil (0"-12") A3	/G	SVOC 8270C (1)	(Ice Only) (1)		S11LP-03-CNF-A3	S: 10/17/2003/ 1224	SWMULL - CS-03
S11LP-03-CNF- Soil (0"-12") A4	/G	SVOC 8270C (1)	(Ice Only) (1)		S11LP-03-CNF-A4	S: 10/17/2003/ 1232	SWMULL - CS-04
S11LP-03-CNF- Soil (0"-12") A5	/G	SVOC 8270C (1)	(Ice Only) (1)		S11LP-03-CNF-A5	S: 10/17/2003/ 1235	SWMULL - CS-05
S11WP2-03-CN Soil (0"-12") FA1 (MS/MSD)	/G	TMET (1)	(Ice Only) (1)		S11WP2-03-CNF-A1	S: 10/17/2003/ 1330	SWMULL - CS-06 SWMULL - CS-09
S11WP2-03-CN Soil (0"-12") FA2	/G	TMET (1)	(Ice Only) (1)		S11WP2-03-CNF-A2	S: 10/17/2003/ 1334	SWMULL - CS-10
S11WP2-03-CN Soil (0"-12") FA3	/G	TMET (1)	(Ice Only) (1)		S11WP2-03-CNF-A3	S: 10/17/2003/ 1335	SWMULL - CS-11
S11WP2-03-CN Soil (0"-12") FA4	/G	TMET (1)	(Ice Only) (1)		S11WP2-03-CNF-A4	S: 10/17/2003/ 1336	SWMULL - CS-12
S11WP2-03-CN Soil (0"-12") FA5	/G	TMET (1)	(Ice Only) (1)		S11WP2-03-CNF-A5	S: 10/17/2003/ 1338	SWMULL - CS-13

Shipment for Case Complete?	Sample(s) to be used for laboratory QC: (MS/MSD) S11WP2-03-CN-FA1 (MS/MSD) S11LP-03-CN-FA1 (MS/MSD)	Additional Sampler Signature(s):	Cooler Temperature Upon Receipt:	Chain of Custody Seal Number:
Analysis Key: SVOC 8270C = SVOC 8270C, TMET = Total Metals	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G		Custody Seal Intact? _____ Shipment Iced? _____

TR Number: 8-443278439-101603-0001

PR provides preliminary results. Requests for preliminary results will increase analytical costs.
Send Copy to: North Wind Inc., 454 Shoup Ave, St 200, Idaho Falls, Idaho 83402, Attn: Tom Matzen, Phone 208/528-8718

LABORATORY COPY

Date Shipped:		Chain of Custody Record		Sampler Signature: <i>[Signature]</i>		For Lab Use Only	
Carrier Name: By Hand		Relinquished By (Date / Time)		Received By (Date / Time)		Lab Contract No: _____	
Airbill: Mountain States Analytical, LLC.		<i>[Signature]</i> 08/11/03 1600		<i>[Signature]</i> 08-17-03 1600		Unit Price: _____	
Shipped to: Salt Lake City UT 0-		2		3		Transfer To: _____	
		3		4		Lab Contract No: _____	
		4				Unit Price: _____	

SAMPLE NO.	MATRIX SAMPLER	CONC TYPE	ANALYSIS/ TURNDOWN	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME	FOR LAB USE ONLY Sample Condition On Receipt
S11WP2-03-CN Soil (0"-12") F-A6	/G	TMET (1)	(Ice Only) (1)	S11WP2-03-CN-F-A6	S: 10/17/2003/ SW MULL - CS - 14	1339	
S11WP2-03-CN Soil (0"-12") F-A7	/G	TMET (1)	(Ice Only) (1)	S11WP2-03-CN-F-A7	S: 10/17/2003/ SW MULL - CS - 15	1346	
S11WP2-03-CN Soil (0"-12") F-A8	/G	TMET (1)	(Ice Only) (1)	S11WP2-03-CN-F-A8	S: 10/17/2003/ SW MULL - CS - 16	1341	
S11WP3-03-CN Soil (0"-12") F-A1	/G	TMET (1)	(Ice Only) (1)	S11WP3-03-CN-F-A1	S: 10/17/2003/ SW MULL - CS - 17	1304	
S11WP3-03-CN Soil (0"-12") F-A2	/G	TMET (1)	(Ice Only) (1)	S11WP3-03-CN-F-A2	S: 10/17/2003/ SW MULL - CS - 18	1301	
S11WP3-03-CN Soil (0"-12") F-A3	/G	TMET (1)	(Ice Only) (1)	S11WP3-03-CN-F-A3	S: 10/17/2003/ SW MULL - CS - 19	1304	
S11WP3-03-CN Soil (0"-12") F-A4	/G	TMET (1)	(Ice Only) (1)	S11WP3-03-CN-F-A4	S: 10/17/2003/ SW MULL - CS - 20	1306	
S11WP3-03-CN Soil (0"-12") F-A5	/G	TMET (1)	(Ice Only) (1)	S11WP3-03-CN-F-A5	S: 10/17/2003/ SW MULL - CS - 21	1308	
S11WP3-03-CN Water F-A7	/G	TMET (1)	(Ice Only) (1)	S11WP3-03-CN-F-A7	S: 10/17/2003 SW MULL - CS - 22	1140	

Shipment for Case Complete/N	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s):	Cooler Temperature Upon Receipt	Chain of Custody Seal Number:
Analysis Key: SVOC 8270C = SVOC 8270C, TMET = Total Metals	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G		



North Wind, Inc.
Generic Chain of Custody

Reference Case SOW# 08 070
Client No:
SDG No:

Date Shipped: Carrier Name: By Hand Albitt: Shipped to: Mountain States Analytical, LLC. Salt Lake City UT 0 -	Chain of Custody Record		Sampler Signature: <i>[Signature]</i>	For Lab Use Only
	Relinquished By	(Date / Time)	Received By	Lab Contract No:
	1 <i>[Signature]</i>	10/17/03 1600	1 <i>[Signature]</i>	Unit Price:
	2			Transfer To:
	3			Lab Contract No:
4			Unit Price:	

SAMPLE NO.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURBIDIMETER	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/ TIME	FOR LAB USE ONLY Sample Condition On Receipt
S11LP-03-CNF-A6	Soil (0"-12")	/G	SVOC 8270C (1)	(Ice Only) (1)	S11LP-03-CNF-A6	S: 10/17/2003 / 1237	SWMULLICS-06
S11LP-03-CNF-A7	Soil (0"-12")	/G	SVOC 8270C (1)	(Ice Only) (1)	S11LP-03-CNF-A7	S: 10/17/2003 / 1241	SWMULLICS-07
S11LP-03-CNF-A8	Soil (0"-12")	/G	SVOC 8270C (1)	(Ice Only) (1)	S11LP-03-CNF-A8	S: 10/17/2003	SWMULLICS-08

Shipment for Case Complete?	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s):	Cooler Temperature Upon Receipt	Chain of Custody Seal Number:
Analyst Key:	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G		Custody Seal Intact? <input type="checkbox"/> Shipment Iced? <input type="checkbox"/>
SVOC 8270C = SVOC 8270C				

October 31, 2003

Thomas Matzen
North Wind Environmental, Inc.
545 Shoup Avenue
Idaho Falls, ID 83402
(208) 528-8718 Fax:

Project: TEAD SWMU 11

Work Order: 0310129

Project ID: TEAD SWMU 11

Dear Thomas Matzen,

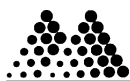
Thank you for using Mountain States Analytical, LLC (MSA) as your environmental information resource. Our reports are designed to meet the Certified Laboratory Reporting Requirements of Utah Administrative Code R444-14-12(10) and the National Environmental Laboratory Accreditation Program (NELAP), Section 5.13.

This is Report Number 0310129-1 and contains 19 pages of information for the 9 samples submitted to MSA on Tuesday, October 21, 2003. Any sample receipt documentation detailed in the Work Order Receipt Summary of this report (e.g., Chain-of-Custody, Work Order Authorization, etc.) and/or analytical results noted as "see attached " are included by reference as attachments following page 19. For regulatory compliance reporting, individual pages or portions of this report may not be separated. Except as noted, the test results for the methods and parameters listed on MSA's most recent NELAC certification letter meet all requirements of NELAC.

If you have any questions regarding the information contained in this report, please feel free to contact me at (800)973-6724 ext. 3026 or by e-mail at rlarsen@msalabs.net.

Mountain States Analytical, LLC

Rolf E. Larsen
Senior Project Manager

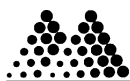


Sample Summary

Client: North Wind Environmental, Inc.
Project: TEAD SWMU 11
Project ID: TEAD SWMU 11

Report Number: 0310129-1
Date Reported: 10/31/03
Work Order: 0310129

Lab Sample ID	Client Sample ID	Additional Sample Information	Matrix	Date Collected
0310129-01A	S11WP1-03-CNF-A10		Water	10/20/03
0310129-01B	SDG: NWE-016			11/06/03
0310129-02A	S11WP1-03-CNF-A1		Soil	10/20/03
0310129-03A	S11WP1-03-CNF-A2		Soil	10/20/03
0310129-04A	S11WP1-03-CNF-A3		Soil	10/20/03
0310129-05A	S11WP1-03-CNF-A4		Soil	10/20/03
0310129-06A	S11WP1-03-CNF-A5		Soil	10/20/03
0310129-07A	S11WP1-03-CNF-A6		Soil	10/20/03
0310129-08A	S11WP1-03-CNF-A7		Soil	10/20/03
0310129-09A	S11WP1-03-CNF-A8		Soil	10/20/03



Holding Time Summary

Client: North Wind Environmental, Inc.
Project: TEAD SWMU 11
Project ID: TEAD SWMU 11

Report Number: 0310129-1
Date Reported: 10/31/03
Work Order: 0310129

Sample ID	Client Sample ID	Date Collected						
0310129-01A	S11WP1-03-CNF-A10	10/20/03 14:00						
Leachate								
Parameter	Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT	
Metals by ICP, USACE				10/22/03 09:00		10/30/03 14:53		180
0310129-02A	S11WP1-03-CNF-A1	10/20/03 15:24						
Leachate								
Parameter	Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT	
Metals by hrICP (USACE)				10/22/03 12:45		10/23/03 15:11		180
Moisture						10/21/03 16:05		270
0310129-03A	S11WP1-03-CNF-A2	10/20/03 15:37						
Leachate								
Parameter	Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT	
Metals by hrICP (USACE)				10/22/03 12:45		10/23/03 15:46		180
Moisture						10/21/03 16:05		270
0310129-04A	S11WP1-03-CNF-A3	10/20/03 15:40						
Leachate								
Parameter	Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT	
Metals by hrICP (USACE)				10/22/03 12:45		10/23/03 15:51		180
Moisture						10/21/03 16:05		270
0310129-05A	S11WP1-03-CNF-A4	10/20/03 15:45						
Leachate								
Parameter	Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT	
Metals by hrICP (USACE)				10/22/03 12:45		10/23/03 15:56		180
Moisture						10/21/03 16:05		270
0310129-06A	S11WP1-03-CNF-A5	10/20/03 15:50						
Leachate								
Parameter	Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT	
Metals by hrICP (USACE)				10/22/03 12:45		10/23/03 16:01		180
Moisture						10/21/03 16:05		270

* - The recommended holding time was exceeded



Holding Time Summary

Client: North Wind Environmental, Inc.
Project: TEAD SWMU 11
Project ID: TEAD SWMU 11

Report Number: 0310129-1
Date Reported: 10/31/03
Work Order: 0310129

Sample ID	Client Sample ID	Date Collected						
0310129-07A	S11WP1-03-CNF-A6	10/20/03 15:51						
Leachate								
Parameter	Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT	
Metals by hrICP (USACE)				10/22/03 12:45		10/23/03 16:06	180	
Moisture						10/21/03 16:05	270	
0310129-08A	S11WP1-03-CNF-A7	10/20/03 15:55						
Leachate								
Parameter	Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT	
Metals by hrICP (USACE)				10/22/03 12:45		10/23/03 16:11	180	
Moisture						10/21/03 16:05	270	
0310129-09A	S11WP1-03-CNF-A8	10/20/03 15:59						
Leachate								
Parameter	Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT	
Metals by hrICP (USACE)				10/22/03 12:45		10/23/03 16:16	180	
Moisture						10/21/03 16:05	270	

* - The recommended holding time was exceeded

Client: Thomas Matzen
North Wind Environmental, Inc.
545 Shoup Avenue
Idaho Falls, ID 83402
(208) 528-8718

Report Number: 0310129-1
Date Reported: 10/31/03
Work Order: 0310129
Lab Sample ID: 0310129-01A
Client Sample ID: S11WP1-03-CNF-A10
Date Collected: 10/20/03
Date Received: 10/21/03 07:20
Matrix: Water
COC ID:

Project: TEAD SWMU 11
Project ID: TEAD SWMU 11
Purchase Order:

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 3005A: Flame/ICP Prep, Water							
Prep Batch ID: 12392						10/22/03 09:00	BBO
SW-846 6010B: Metals by ICP, USACE, Water							
Arsenic	U	0.03	0.15	mg/L	1	10/30/03 14:53	JMR
Lead	U	0.03	0.15	mg/L	1	10/30/03 14:53	JMR

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

* - Result is greater than the associated action level

Client: Thomas Matzen
North Wind Environmental, Inc.
545 Shoup Avenue
Idaho Falls, ID 83402
(208) 528-8718

Report Number: 0310129-1
Date Reported: 10/31/03
Work Order: 0310129
Lab Sample ID: 0310129-02A
Client Sample ID: S11WP1-03-CNF-A1
Date Collected: 10/20/03
Date Received: 10/21/03 07:20
Matrix: Soil
COC ID:

Project: TEAD SWMU 11
Project ID: TEAD SWMU 11
Purchase Order:

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
ASTM D2216-92: Moisture, Solid							
Percent Moisture	2.90	0.01	0.01	%	1	10/21/03 16:05	SSJ
SW-846 3050B: Flame/hrICP Prep, Solid							
Prep Batch ID: 12394					51	10/22/03 12:45	BBO
SW-846 6010B: Metals by hrICP (USACE), Solid							
Arsenic	U	1.54	7.88	mg/Kg	1	10/23/03 15:11	JMR
Lead	2.88 J	1.54	7.88	mg/Kg	1	10/23/03 15:11	JMR
Note for 10/23/03 15:11 analysis: Results are corrected for dry weight.							

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

* - Result is greater than the associated action level

Client: Thomas Matzen
North Wind Environmental, Inc.
545 Shoup Avenue
Idaho Falls, ID 83402
(208) 528-8718

Report Number: 0310129-1
Date Reported: 10/31/03
Work Order: 0310129
Lab Sample ID: 0310129-03A
Client Sample ID: S11WP1-03-CNF-A2
Date Collected: 10/20/03
Date Received: 10/21/03 07:20
Matrix: Soil
COC ID:

Project: TEAD SWMU 11
Project ID: TEAD SWMU 11
Purchase Order:

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
ASTM D2216-92: Moisture, Solid							
Percent Moisture	5.29	0.01	0.01	%	1	10/21/03 16:05	SSJ
SW-846 3050B: Flame/hrICP Prep, Solid							
Prep Batch ID: 12394					53	10/22/03 12:45	BBO
SW-846 6010B: Metals by hrICP (USACE), Solid							
Arsenic	1.79 J	1.69	8.43	mg/Kg	1	10/23/03 15:46	JMR
Lead	3.06 J	1.69	8.43	mg/Kg	1	10/23/03 15:46	JMR

Note for 10/23/03 15:46 analysis: Results are corrected for dry weight.

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

* - Result is greater than the associated action level

Client: Thomas Matzen
North Wind Environmental, Inc.
545 Shoup Avenue
Idaho Falls, ID 83402
(208) 528-8718

Report Number: 0310129-1
Date Reported: 10/31/03
Work Order: 0310129
Lab Sample ID: 0310129-04A
Client Sample ID: S11WP1-03-CNF-A3
Date Collected: 10/20/03
Date Received: 10/21/03 07:20
Matrix: Soil
COC ID:

Project: TEAD SWMU 11
Project ID: TEAD SWMU 11
Purchase Order:

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
ASTM D2216-92: Moisture, Solid							
Percent Moisture	8.96	0.01	0.01	%	1	10/21/03 16:05	SSJ
SW-846 3050B: Flame/hrICP Prep, Solid							
Prep Batch ID: 12394					54	10/22/03 12:45	BBO
SW-846 6010B: Metals by hrICP (USACE), Solid							
Arsenic	3.73 J	1.76	8.91	mg/Kg	1	10/23/03 15:51	JMR
Lead	2.75 J	1.76	8.91	mg/Kg	1	10/23/03 15:51	JMR
Note for 10/23/03 15:51 analysis: Results are corrected for dry weight.							

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

* - Result is greater than the associated action level

Client: Thomas Matzen
North Wind Environmental, Inc.
545 Shoup Avenue
Idaho Falls, ID 83402
(208) 528-8718

Report Number: 0310129-1
Date Reported: 10/31/03
Work Order: 0310129
Lab Sample ID: 0310129-05A
Client Sample ID: S11WP1-03-CNF-A4
Date Collected: 10/20/03
Date Received: 10/21/03 07:20
Matrix: Soil
COC ID:

Project: TEAD SWMU 11
Project ID: TEAD SWMU 11
Purchase Order:

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
ASTM D2216-92: Moisture, Solid							
Percent Moisture	1.53	0.01	0.01	%	1	10/21/03 16:05	SSJ
SW-846 3050B: Flame/hrICP Prep, Solid							
Prep Batch ID: 12394					50	10/22/03 12:45	BBO
SW-846 6010B: Metals by hrICP (USACE), Solid							
Arsenic	2.23 J	1.52	7.62	mg/Kg	1	10/23/03 15:56	JMR
Lead	2.84 J	1.52	7.62	mg/Kg	1	10/23/03 15:56	JMR

Note for 10/23/03 15:56 analysis: Results are corrected for dry weight.

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

* - Result is greater than the associated action level

Client: Thomas Matzen
North Wind Environmental, Inc.
545 Shoup Avenue
Idaho Falls, ID 83402
(208) 528-8718

Report Number: 0310129-1
Date Reported: 10/31/03
Work Order: 0310129
Lab Sample ID: 0310129-06A
Client Sample ID: S11WP1-03-CNF-A5
Date Collected: 10/20/03
Date Received: 10/21/03 07:20
Matrix: Soil
COC ID:

Project: TEAD SWMU 11
Project ID: TEAD SWMU 11
Purchase Order:

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
ASTM D2216-92: Moisture, Solid							
Percent Moisture	0.410	0.01	0.01	%	1	10/21/03 16:05	SSJ
SW-846 3050B: Flame/hrICP Prep, Solid							
Prep Batch ID: 12394					50	10/22/03 12:45	BBO
SW-846 6010B: Metals by hrICP (USACE), Solid							
Arsenic	2.11 J	1.51	7.57	mg/Kg	1	10/23/03 16:01	JMR
Lead	2.51 J	1.51	7.57	mg/Kg	1	10/23/03 16:01	JMR

Note for 10/23/03 16:01 analysis: Results are corrected for dry weight.

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

* - Result is greater than the associated action level

Client: Thomas Matzen
North Wind Environmental, Inc.
545 Shoup Avenue
Idaho Falls, ID 83402
(208) 528-8718

Report Number: 0310129-1
Date Reported: 10/31/03
Work Order: 0310129
Lab Sample ID: 0310129-07A
Client Sample ID: S11WP1-03-CNF-A6
Date Collected: 10/20/03
Date Received: 10/21/03 07:20
Matrix: Soil
COC ID:

Project: TEAD SWMU 11
Project ID: TEAD SWMU 11
Purchase Order:

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
ASTM D2216-92: Moisture, Solid							
Percent Moisture	4.40	0.01	0.01	%	1	10/21/03 16:05	SSJ
SW-846 3050B: Flame/hrICP Prep, Solid							
Prep Batch ID: 12394					51	10/22/03 12:45	BBO
SW-846 6010B: Metals by hrICP (USACE), Solid							
Arsenic	2.82 J	1.57	7.96	mg/Kg	1	10/23/03 16:06	JMR
Lead	3.24 J	1.57	7.96	mg/Kg	1	10/23/03 16:06	JMR

Note for 10/23/03 16:06 analysis: Results are corrected for dry weight.

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

* - Result is greater than the associated action level

11

Client: Thomas Matzen
North Wind Environmental, Inc.
545 Shoup Avenue
Idaho Falls, ID 83402
(208) 528-8718

Report Number: 0310129-1
Date Reported: 10/31/03
Work Order: 0310129
Lab Sample ID: 0310129-08A
Client Sample ID: S11WP1-03-CNF-A7
Date Collected: 10/20/03
Date Received: 10/21/03 07:20
Matrix: Soil
COC ID:

Project: TEAD SWMU 11
Project ID: TEAD SWMU 11
Purchase Order:

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
ASTM D2216-92: Moisture, Solid							
Percent Moisture	1.50	0.01	0.01	%	1	10/21/03 16:05	SSJ
SW-846 3050B: Flame/hrICP Prep, Solid							
Prep Batch ID: 12394					52	10/22/03 12:45	BBO
SW-846 6010B: Metals by hrICP (USACE), Solid							
Arsenic	1.73 J	1.62	7.97	mg/Kg	1	10/23/03 16:11	JMR
Lead	3.65 J	1.62	7.97	mg/Kg	1	10/23/03 16:11	JMR
Note for 10/23/03 16:11 analysis: Results are corrected for dry weight.							

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

* - Result is greater than the associated action level

12

Client: Thomas Matzen
North Wind Environmental, Inc.
545 Shoup Avenue
Idaho Falls, ID 83402
(208) 528-8718

Report Number: 0310129-1
Date Reported: 10/31/03
Work Order: 0310129
Lab Sample ID: 0310129-09A
Client Sample ID: S11WP1-03-CNF-A8
Date Collected: 10/20/03
Date Received: 10/21/03 07:20
Matrix: Soil
COC ID:

Project: TEAD SWMU 11
Project ID: TEAD SWMU 11
Purchase Order:

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
ASTM D2216-92: Moisture, Solid							
Percent Moisture	0.740	0.01	0.01	%	1	10/21/03 16:05	SSJ
SW-846 3050B: Flame/hrICP Prep, Solid							
Prep Batch ID: 12394					51	10/22/03 12:45	BBO
SW-846 6010B: Metals by hrICP (USACE), Solid							
Arsenic	3.53 J	1.51	7.67	mg/Kg	1	10/23/03 16:16	JMR
Lead	2.72 J	1.51	7.67	mg/Kg	1	10/23/03 16:16	JMR
Note for 10/23/03 16:16 analysis: Results are corrected for dry weight.							

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

* - Result is greater than the associated action level



Quality Control Summary

Client: North Wind Environmental, Inc.
Project: TEAD SWMU 11
Project ID: TEAD SWMU 11

Report Number: 0310129-1
Date Reported: 10/31/03
Work Order: 0310129

ASTM D2216-92: Moisture, Solid

QC Type: Sample Duplicate
Sample ID: 0310129-02A DUP
Run ID: WC_031021D

Analysis Date: 10/21/03 16:05
Prep Batch ID: R39543

Units: %
Seq No: 491950

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD Limit
Percent Moisture	2.89						2.90	0.34 20

QC Type: Sample Duplicate
Sample ID: 0310136-02A DUP
Run ID: WC_031021D

Analysis Date: 10/21/03 16:05
Prep Batch ID: R39543

Units: %
Seq No: 491958

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD Limit
Percent Moisture	6.05						5.89	2.7 20

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

NC - Not Calculated: Duplicate value(s) are less than the MDL



Quality Control Summary

Client: North Wind Environmental, Inc.
Project: TEAD SWMU 11
Project ID: TEAD SWMU 11

Report Number: 0310129-1
Date Reported: 10/31/03
Work Order: 0310129

SW-846 6010B: Metals by hrICP (USACE), Solid

QC Type: Method Blank
Sample ID: PBW-12394
Run ID: TJA-IRIS_031023B

Analysis Date: 10/23/03 15:03
Prep Batch ID: 12394

Units: mg/Kg
Seq No: 492339

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD Limit
Arsenic	-0.017	0	0	0	-0.06	0.03		
Lead	-0.0057	0	0	0	-0.06	0.03		

QC Type: Laboratory Control Sample (Water)
Sample ID: LCSW-12394
Run ID: TJA-IRIS_031023B

Analysis Date: 10/23/03 15:06
Prep Batch ID: 12394

Units: mg/Kg
Seq No: 492340

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD Limit
Arsenic	93.0		100	93.0	80	120		
Lead	94.2		100	94.2	80	120		

QC Type: Sample Duplicate
Sample ID: 0310129-02A D
Run ID: TJA-IRIS_031023B

Analysis Date: 10/23/03 15:15
Prep Batch ID: 12394

Units: mg/Kg
Seq No: 492342

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD Limit
Arsenic	2.3J						U	NC 35
Lead	3.4J						2.8 J	18 35

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S -Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

NC - Not Calculated: Duplicate value(s) are less than the MDL

**Quality Control Summary**

Client: North Wind Environmental, Inc.
Project: TEAD SWMU 11
Project ID: TEAD SWMU 11

Report Number: 0310129-1
Date Reported: 10/31/03
Work Order: 0310129

QC Type: Matrix Spike
Sample ID: 0310129-02A MS
Run ID: TJA-IRIS_031023B

Analysis Date: 10/23/03 15:19
Prep Batch ID: 12394

Units: mg/Kg
Seq No: 492343

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD Limit
Arsenic	53.7	U	51.5	104	75	125		
Lead	50.6	2.8 J	51.5	92.6	75	125		

QC Type: Matrix Spike Duplicate
Sample ID: 0310129-02A MSD
Run ID: TJA-IRIS_031023B

Analysis Date: 10/23/03 15:22
Prep Batch ID: 12394

Units: mg/Kg
Seq No: 492344

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD Limit
Arsenic	51.6	U	51.3	101	75	125	53.7	4.0
Lead	50.6	2.8 J	51.3	93.1	75	125	50.6	0.029

QC Type: Post Digestion/Distillation Spike
Sample ID: 0310129-02A A
Run ID: TJA-IRIS_031023B

Analysis Date: 10/23/03 15:25
Prep Batch ID: 12394

Units: mg/Kg
Seq No: 492345

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD Limit
Arsenic	56.6	U	51.0	111	75	125		
Lead	52.7	2.8 J	51.0	97.8	75	125		

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

NC - Not Calculated: Duplicate value(s) are less than the MDL



Quality Control Summary

Client: North Wind Environmental, Inc.
Project: TEAD SWMU 11
Project ID: TEAD SWMU 11

Report Number: 0310129-1
Date Reported: 10/31/03
Work Order: 0310129

QC Type: Serial Dilution
Sample ID: 0310129-02A L
Run ID: TJA-IRIS_031023B

Analysis Date: 10/23/03 15:31
Prep Batch ID: 12394

Units: mg/Kg
Seq No: 492346

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	%D	Limit
Arsenic	U						U	NC	10
Lead	U						2.8 J	NC	10

QC Type: Method Blank
Sample ID: PBW-12392
Run ID: TJA61E_031030A

Analysis Date: 10/30/03 14:29
Prep Batch ID: 12392

Units: mg/L
Seq No: 493395

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Arsenic	-0.0035	0	0	0	-0.06	0.03			
Lead	-0.0016	0	0	0	-0.06	0.03			

QC Type: Laboratory Control Sample (Water)
Sample ID: LCSW-12392
Run ID: TJA61E_031030A

Analysis Date: 10/30/03 14:31
Prep Batch ID: 12392

Units: mg/L
Seq No: 493396

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Arsenic	1.01		1.00	101	80	120			
Lead	0.968		1.00	96.8	80	120			

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

NC - Not Calculated: Duplicate value(s) are less than the MDL



Quality Control Summary

Client: North Wind Environmental, Inc.
Project: TEAD SWMU 11
Project ID: TEAD SWMU 11

Report Number: 0310129-1
Date Reported: 10/31/03
Work Order: 0310129

QC Type: Sample Duplicate
Sample ID: 0309222-09C D
Run ID: TJA61E_031030A

Analysis Date: 10/30/03 14:37
Prep Batch ID: 12392

Units: mg/L
Seq No: 493398

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Arsenic	U						U	NC	20
Lead	U						U	NC	20

QC Type: Matrix Spike
Sample ID: 0309222-09C MS
Run ID: TJA61E_031030A

Analysis Date: 10/30/03 14:41
Prep Batch ID: 12392

Units: mg/L
Seq No: 493399

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Arsenic	1.11	U	1.00	111	80	120			
Lead	0.928	U	1.00	92.8	80	120			

QC Type: Matrix Spike Duplicate
Sample ID: 0309222-09C MSD
Run ID: TJA61E_031030A

Analysis Date: 10/30/03 14:44
Prep Batch ID: 12392

Units: mg/L
Seq No: 493400

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Arsenic	1.10	U	1.00	110	80	120	1.11	0.40	20
Lead	0.930	U	1.00	93.0	80	120	0.928	0.27	20

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

NC - Not Calculated: Duplicate value(s) are less than the MDL



Quality Control Summary

Client: North Wind Environmental, Inc.
Project: TEAD SWMU 11
Project ID: TEAD SWMU 11

Report Number: 0310129-1
Date Reported: 10/31/03
Work Order: 0310129

QC Type: Post Digestion/Distillation Spike
Sample ID: 0309222-09C A
Run ID: TJA61E_031030A

Analysis Date: 10/30/03 14:47
Prep Batch ID: 12392

Units: mg/L
Seq No: 493401

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD Limit
Arsenic	1.08	U	1.00	108	75	125		
Lead	0.916	U	1.00	91.6	75	125		

QC Type: Serial Dilution
Sample ID: 0309222-09C L
Run ID: TJA61E_031030A

Analysis Date: 10/30/03 14:50
Prep Batch ID: 12392

Units: mg/L
Seq No: 493402

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	%D	%D Limit
Arsenic	U						U	NC	10
Lead	U						U	NC	10

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQI

E - Result is outside of quantitation range

R - RPD outside normal precision limits

NC - Not Calculated: Duplicate value(s) are less than the MDL

Date Shipped:		Chain of Custody Record		For Lab Use Only	
Carrier Name:	By Hand	Relinquished By	Signature	Lab Contract No:	
Attrib:	Mountain States Analytical, LLC.	(Date / Time)	Received By	Unit Price:	
Shipped to:	Salt Lake City UT	1	10/20/03 07:30	Transfer To:	
	0 -	2		Lab Contract No:	
		3		Unit Price:	
		4			

SAMPLE NO.	MATRIX SAMPLER	CONC TYPE	ANALYSIS TURAROUND	TAG No./ PRESERVATIVE/ Bottle	STATION LOCATION	SAMPLE COLLECT DATE/TIME	FOR LAB USE ONLY Sample Condition On Receipt
S11WP1-03-CN Soil (0'-12")	/G	TMET (1) PH	(see Only) (1) PH	10/20/03	S11WP1-03-CNF-A1	S: 10/20/2003 15:24	
F-A1 NS/NSD		TMET (1) PH	(see Only) (1) PH	10/20/03	S11WP1-03-CNF-A1	S: 10/20/2003 15:24	
S11WP1-03-CN Water/	/G	TMET (1)	(not preserved) (1) HNO ₃	10/20/03	S11WP1-03-CNF-A10	S: 10/20/2003 14:00	
F-A10 Tom Matzen		TMET (1)	(see Only) (1) HNO ₃	10/20/03	S11WP1-03-CNF-A2	S: 10/20/2003 15:37	
S11WP1-03-CN Soil (0'-12")	/G	TMET (1)	(see Only) (1)	10/20/03	S11WP1-03-CNF-A3	S: 10/20/2003 15:40	
F-A2		TMET (1)	(see Only) (1)	10/20/03	S11WP1-03-CNF-A4	S: 10/20/2003 15:45	
S11WP1-03-CN Soil (0'-12")	/G	TMET (1)	(see Only) (1)	10/20/03	S11WP1-03-CNF-A5	S: 10/20/2003 15:50	
F-A3		TMET (1)	(see Only) (1)	10/20/03	S11WP1-03-CNF-A6	S: 10/20/2003 15:51	
S11WP1-03-CN Soil (0'-12")	/G	TMET (1)	(see Only) (1)	10/20/03	S11WP1-03-CNF-A7	S: 10/20/2003 15:55	
F-A4		TMET (1)	(see Only) (1)	10/20/03	S11WP1-03-CNF-A8	S: 10/20/2003 15:59	
S11WP1-03-CN Soil (0'-12")	/G	TMET (1)	(see Only) (1)	10/20/03			
F-A5		TMET (1)	(see Only) (1)	10/20/03			
S11WP1-03-CN Soil (0'-12")	/G	TMET (1)	(see Only) (1)	10/20/03			
F-A6		TMET (1)	(see Only) (1)	10/20/03			
S11WP1-03-CN Soil (0'-12")	/G	TMET (1)	(see Only) (1)	10/20/03			
F-A7		TMET (1)	(see Only) (1)	10/20/03			
S11WP1-03-CN Soil (0'-12")	/G	TMET (1)	(see Only) (1)	10/20/03			
F-A8		TMET (1)	(see Only) (1)	10/20/03			

Shipment for Case Complete/N	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s):	Code Temperature Upon Receipt	Chain of Custody Seal Number:
	S11WP1-03-CNF-A1			
Analysis Key:	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G	Custody Seal Intact? <input type="checkbox"/>	Shipment Iced? <input type="checkbox"/>
TMET = Total Metals				

Mountain States Analytical, LLC

Sample Receipt Checklist

Client Name: Northwind Env.
Carrier: Client

Work Order No. 0310129
Carrier Number: _____

☐ Hand delivered, no cooler ☒ Hand delivered, sample(s) taken out at receiving counter

Cooler Information: Non-Rad ☒ Exempt ☐ White I ☐ Yellow II ☐ Yellow III ☐ ALARA: α _____ / β _____
Ludlum Model 3 Serial # _____ Ludlum Model 2929 Scaler Serial # _____
Smear Results: Cooler: α _____ / β _____ Inner Pkg: α _____ / β _____ Samples: α _____ / β _____
Transport Index (1 meter reading for Yellow II & III only) _____ mR/hr

Cooler Number/ID: Red Surface Radioactivity Reading (if required) _____ mR/hr
Condition of Shipping Container: Good ☒ Fair ☐ Damaged (explain) _____
Cooler Sealed (taped): Yes ☐ No ☒ Not Applicable ☐ PID Reading NA ppm N/A ☒ Hand Delivered.
☐ Charging Battery
☐ Out of Service

Custody Seals Present: Yes ☐ No ☒ Not Applicable ☐
Intact ☐ Broken ☐ Seal Number: _____

Coolant: Ice ☐ Blue Ice ☐ None ☒ Other: _____
State of Coolant: Frozen ☐ Partially Frozen ☐ Melted ☐
Thermometer ID: _____ Reading: _____ °C CF: _____ Corrected Temp: _____ °C Temp Blank Included: Yes ☐ No ☐

Packing Description: Sample jars wrapped with absorbant cloth.

Chain-Of-Custody Information:

COC Present: Yes ☒ No ☐ Other: _____
COC Number(s): _____
COC signed (relinquished and received): Yes ☒ No ☐ Not Applicable ☐
COC agrees with sample labels: Yes ☒ No ☐ Not Applicable ☐
Notes: _____

Sample Information:

Samples included in cooler: SI1WP1-03-CNF-A1 - A8
SI1WP1-03-CNF-A10

Custody Seals Present: Yes ☒ No ☐ Not Applicable ☐ Other: _____
Intact ☒ Broken ☐ Seal Number(s) _____

Sample containers intact: Yes ☒ No ☐ Notes: _____
Samples in proper containers: Yes ☒ No ☐
Sufficient sample volume: Yes ☒ No ☐
All samples received in hold time: Yes ☒ No ☐

Water - VOA's have zero headspace: Yes ☐ No ☐ Not Applicable ☒
Pre-preserved with HCl: ☐ Pre-preserved with Na2S2O3: ☐ Non-Preserved: ☐

Notes: _____

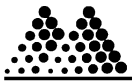
Water - pH acceptable upon receipt: Yes ☒ Adjusted (see comments below) ☐ Not Applicable ☐
HNO₃ = 12 H₂SO₄ = _____ NaOH = _____ ZnAC / NaOH = _____ HCL = _____

Water - pH adjusted: (MSA Tracking No.)
HNO₃ _____ H₂SO₄ _____ NaOH _____
ZnAC _____ Na₂SO₂O₃ _____ Other _____

Notes: _____

Cooler Contents Inspected & Verified By:

Pam Olsen Date: 10/21/03 Time: 0732 Reviewed by: JA Date: 10/21/03



October 31, 2003

Thomas Matzen
North Wind Environmental, Inc.
545 Shoup Avenue
Idaho Falls, ID 83402
(208) 528-8718 Fax:

Project: TEAD SWMU 11

Work Order: 0310136

Project ID: TEAD SWMU 11

Dear Thomas Matzen,

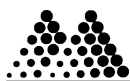
Thank you for using Mountain States Analytical, LLC (MSA) as your environmental information resource. Our reports are designed to meet the Certified Laboratory Reporting Requirements of Utah Administrative Code R444-14-12(10) and the National Environmental Laboratory Accreditation Program (NELAP), Section 5.13.

This is Report Number 0310136-1 and contains 27 pages of information for the 9 samples submitted to MSA on Tuesday, October 21, 2003. Any sample receipt documentation detailed in the Work Order Receipt Summary of this report (e.g., Chain-of-Custody, Work Order Authorization, etc.) and/or analytical results noted as "see attached " are included by reference as attachments following page 27. For regulatory compliance reporting, individual pages or portions of this report may not be separated. Except as noted, the test results for the methods and parameters listed on MSA's most recent NELAC certification letter meet all requirements of NELAC.

If you have any questions regarding the information contained in this report, please feel free to contact me at (800)973-6724 ext. 3026 or by e-mail at rlarsen@msalabs.net.

Mountain States Analytical, LLC

Rolf E. Larsen
Senior Project Manager



Sample Summary

Client: North Wind Environmental, Inc.
Project: TEAD SWMU 11
Project ID: TEAD SWMU 11

Report Number: 0310136-1
Date Reported: 10/31/03
Work Order: 0310136

Lab Sample ID	Client Sample ID	Additional Sample Information	Matrix	Date Collected
0310136-01A	S11SP-03-CNF-A10		Water	10/21/03
0310136-01B	SDG: NWE-017			11/05/03
0310136-02A	S11SP-03-CNF-A1		Soil	10/21/03
0310136-03A	S11SP-03-CNF-A2		Soil	10/21/03
0310136-04A	S11SP-03-CNF-A3		Soil	10/21/03
0310136-05A	S11SP-03-CNF-A4		Soil	10/21/03
0310136-06A	S11SP-03-CNF-A5		Soil	10/21/03
0310136-07A	S11SP-03-CNF-A6		Soil	10/21/03
0310136-08A	S11SP-03-CNF-A7		Soil	10/21/03
0310136-09A	S11SP-03-CNF-A8		Soil	10/21/03



Holding Time Summary

Client: North Wind Environmental, Inc.
Project: TEAD SWMU 11
Project ID: TEAD SWMU 11

Report Number: 0310136-1
Date Reported: 10/31/03
Work Order: 0310136

Sample ID	Client Sample ID	Date Collected						
0310136-01A	S11SP-03-CNF-A10	10/21/03 10:00						
		Leachate						
Parameter		Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT
Semi-Volatiles (USACE)					10/25/03 13:00	7	10/30/03 22:31	40
0310136-02A	S11SP-03-CNF-A1	10/21/03 10:53						
		Leachate						
Parameter		Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT
Moisture							10/21/03 16:05	270
Semi-Volatiles (USACE)					10/21/03 16:00	14	10/22/03 02:37	40
0310136-03A	S11SP-03-CNF-A2	10/21/03 10:55						
		Leachate						
Parameter		Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT
Moisture							10/21/03 16:05	270
Semi-Volatiles (USACE)					10/21/03 16:00	14	10/22/03 04:06	40
0310136-04A	S11SP-03-CNF-A3	10/21/03 10:58						
		Leachate						
Parameter		Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT
Moisture							10/21/03 16:05	270
Semi-Volatiles (USACE)					10/21/03 16:00	14	10/22/03 04:35	40
0310136-05A	S11SP-03-CNF-A4	10/21/03 11:00						
		Leachate						
Parameter		Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT
Moisture							10/21/03 16:05	270
Semi-Volatiles (USACE)					10/21/03 16:00	14	10/22/03 05:05	40
0310136-06A	S11SP-03-CNF-A5	10/21/03 11:03						
		Leachate						
Parameter		Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT
Moisture							10/21/03 16:05	270
Semi-Volatiles (USACE)					10/21/03 16:00	14	10/22/03 05:34	40

* - The recommended holding time was exceeded



Holding Time Summary

Client: North Wind Environmental, Inc.
Project: TEAD SWMU 11
Project ID: TEAD SWMU 11

Report Number: 0310136-1
Date Reported: 10/31/03
Work Order: 0310136

Sample ID	Client Sample ID	Date Collected						
0310136-07A	S11SP-03-CNF-A6	10/21/03 11:05						
Leachate								
Parameter	Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT	
Moisture						10/21/03 16:05	270	
Semi-Volatiles (USACE)				10/21/03 16:00	14	10/22/03 06:04	40	
0310136-08A	S11SP-03-CNF-A7	10/21/03 11:08						
Leachate								
Parameter	Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT	
Moisture						10/21/03 16:05	270	
Semi-Volatiles (USACE)				10/21/03 16:00	14	10/22/03 06:33	40	
0310136-09A	S11SP-03-CNF-A8	10/21/03 11:11						
Leachate								
Parameter	Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT	
Moisture						10/21/03 16:05	270	
Semi-Volatiles (USACE)				10/21/03 16:00	14	10/22/03 07:03	40	

* - The recommended holding time was exceeded

Client: Thomas Matzen
North Wind Environmental, Inc.
545 Shoup Avenue
Idaho Falls, ID 83402
(208) 528-8718

Report Number: 0310136-1
Date Reported: 10/31/03
Work Order: 0310136
Lab Sample ID: 0310136-01A
Client Sample ID: S11SP-03-CNF-A10
Date Collected: 10/21/03
Date Received: 10/21/03 14:30
Matrix: Water
COC ID:

Project: TEAD SWMU 11
Project ID: TEAD SWMU 11
Purchase Order:

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 8270C: Semi-Volatiles (USACE), Water							
Benz(a)anthracene	U	3.1	7.69	µg/L	1	10/30/03 22:31	KPF
Benzo(b)fluoranthene	U	3.1	7.69	µg/L	1	10/30/03 22:31	KPF
Surrogates		Recovery Range					
2,4,6-Tribromophenol	93.3		41-146	% Recovery	1	10/30/03 22:31	KPF
2-Fluorophenol	38.2		30-68	% Recovery	1	10/30/03 22:31	KPF
2-Fluorobiphenyl	61.8		47-97	% Recovery	1	10/30/03 22:31	KPF
Nitrobenzene-d5	66.2		56-98	% Recovery	1	10/30/03 22:31	KPF
Phenol-d6	31.2		23-44	% Recovery	1	10/30/03 22:31	KPF
Terphenyl-d14	58.6		37-116	% Recovery	1	10/30/03 22:31	KPF

SW-846 3510C/EPA 625: Separatory Funnel Liq/Liq Ext., SV, Water

Prep Batch ID: 12401 10/22/03 11:00 RJS
Prep Batch ID: 12418 1.5 10/25/03 13:00 SBC

Note for 10/22/03 11:00 analysis: Extraction order was Acid-Base-Neutral.

Note for 10/25/03 13:00 analysis: Extraction order was Acid-Base-Neutral. Sample is a re-extract.

Client: Thomas Matzen
North Wind Environmental, Inc.
545 Shoup Avenue
Idaho Falls, ID 83402
(208) 528-8718

Report Number: 0310136-1
Date Reported: 10/31/03
Work Order: 0310136
Lab Sample ID: 0310136-02A
Client Sample ID: S11SP-03-CNF-A1
Date Collected: 10/21/03
Date Received: 10/21/03 14:30
Matrix: Soil
COC ID:

Project: TEAD SWMU 11
Project ID: TEAD SWMU 11
Purchase Order:

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
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ASTM D2216-92: Moisture, Solid

Percent Moisture	5.89	0.01	0.01	%	1	10/21/03 16:05	SSJ
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SW-846 8270C: Semi-Volatiles (USACE), Solid

Benz(a)anthracene	U	42.5	351	µg/Kg	1	10/22/03 02:37	KPF
Benzo(b)fluoranthene	U	85	351	µg/Kg	1	10/22/03 02:37	KPF

Surrogates
Recovery Range

2,4,6-Tribromophenol	109	45-135	% Recovery	1	10/22/03 02:37	KPF
2-Fluorophenol	64.5	45-135	% Recovery	1	10/22/03 02:37	KPF
2-Fluorobiphenyl	65.1	45-135	% Recovery	1	10/22/03 02:37	KPF
Nitrobenzene-d5	67.9	45-135	% Recovery	1	10/22/03 02:37	KPF
Phenol-d6	62.0	45-135	% Recovery	1	10/22/03 02:37	KPF
Terphenyl-d14	80.7	45-135	% Recovery	1	10/22/03 02:37	KPF

Note for 10/22/03 02:37 analysis: Results are corrected for dry weight.

SW-846 3550B: Ultrasonic Extraction, SV, Solid

Prep Batch ID: 12391	10/21/03 16:00	SBC
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U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

* - Result is greater than the associated action level

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Client: Thomas Matzen
North Wind Environmental, Inc.
545 Shoup Avenue
Idaho Falls, ID 83402
(208) 528-8718

Report Number: 0310136-1
Date Reported: 10/31/03
Work Order: 0310136
Lab Sample ID: 0310136-03A
Client Sample ID: S11SP-03-CNF-A2
Date Collected: 10/21/03
Date Received: 10/21/03 14:30
Matrix: Soil
COC ID:

Project: TEAD SWMU 11
Project ID: TEAD SWMU 11
Purchase Order:

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
ASTM D2216-92: Moisture, Solid							
Percent Moisture	11.4	0.01	0.01	%	1	10/21/03 16:05	SSJ
SW-846 8270C: Semi-Volatiles (USACE), Solid							
Benz(a)anthracene	U	45.1	372	µg/Kg	1	10/22/03 04:06	KPF
Benzo(b)fluoranthene	U	90.3	372	µg/Kg	1	10/22/03 04:06	KPF
Surrogates							
		Recovery Range					
2,4,6-Tribromophenol	94.8	45-135		% Recovery	1	10/22/03 04:06	KPF
2-Fluorophenol	61.5	45-135		% Recovery	1	10/22/03 04:06	KPF
2-Fluorobiphenyl	63.1	45-135		% Recovery	1	10/22/03 04:06	KPF
Nitrobenzene-d5	64.6	45-135		% Recovery	1	10/22/03 04:06	KPF
Phenol-d6	59.1	45-135		% Recovery	1	10/22/03 04:06	KPF
Terphenyl-d14	68.4	45-135		% Recovery	1	10/22/03 04:06	KPF

Note for 10/22/03 04:06 analysis: Results are corrected for dry weight.

SW-846 3550B: Ultrasonic Extraction, SV, Solid

Prep Batch ID: 12391 10/21/03 16:00 SBC

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

* - Result is greater than the associated action level

Client: Thomas Matzen
North Wind Environmental, Inc.
545 Shoup Avenue
Idaho Falls, ID 83402
(208) 528-8718

Report Number: 0310136-1
Date Reported: 10/31/03
Work Order: 0310136
Lab Sample ID: 0310136-04A
Client Sample ID: S11SP-03-CNF-A3
Date Collected: 10/21/03
Date Received: 10/21/03 14:30
Matrix: Soil
COC ID:

Project: TEAD SWMU 11
Project ID: TEAD SWMU 11
Purchase Order:

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
ASTM D2216-92: Moisture, Solid							
Percent Moisture	9.78	0.01	0.01	%	1	10/21/03 16:05	SSJ
SW-846 8270C: Semi-Volatiles (USACE), Solid							
Benz(a)anthracene	U	44.3	366	µg/Kg	1	10/22/03 04:35	KPF
Benzo(b)fluoranthene	U	88.7	366	µg/Kg	1	10/22/03 04:35	KPF
Surrogates							
		Recovery Range					
2,4,6-Tribromophenol	109	45-135		% Recovery	1	10/22/03 04:35	KPF
2-Fluorophenol	68.5	45-135		% Recovery	1	10/22/03 04:35	KPF
2-Fluorobiphenyl	67.7	45-135		% Recovery	1	10/22/03 04:35	KPF
Nitrobenzene-d5	72.0	45-135		% Recovery	1	10/22/03 04:35	KPF
Phenol-d6	65.7	45-135		% Recovery	1	10/22/03 04:35	KPF
Terphenyl-d14	82.6	45-135		% Recovery	1	10/22/03 04:35	KPF

Note for 10/22/03 04:35 analysis: Results are corrected for dry weight.

SW-846 3550B: Ultrasonic Extraction, SV, Solid

Prep Batch ID: 12391 10/21/03 16:00 SBC

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

* - Result is greater than the associated action level

Client: Thomas Matzen
North Wind Environmental, Inc.
545 Shoup Avenue
Idaho Falls, ID 83402
(208) 528-8718

Report Number: 0310136-1
Date Reported: 10/31/03
Work Order: 0310136
Lab Sample ID: 0310136-05A
Client Sample ID: S11SP-03-CNF-A4
Date Collected: 10/21/03
Date Received: 10/21/03 14:30
Matrix: Soil
COC ID:

Project: TEAD SWMU 11
Project ID: TEAD SWMU 11
Purchase Order:

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
ASTM D2216-92: Moisture, Solid							
Percent Moisture	1.55	0.01	0.01	%	1	10/21/03 16:05	SSJ
SW-846 8270C: Semi-Volatiles (USACE), Solid							
Benz(a)anthracene	U	40.6	335	µg/Kg	1	10/22/03 05:05	KPF
Benzo(b)fluoranthene	U	81.3	335	µg/Kg	1	10/22/03 05:05	KPF
Surrogates							
		Recovery Range					
2,4,6-Tribromophenol	103	45-135		% Recovery	1	10/22/03 05:05	KPF
2-Fluorophenol	64.6	45-135		% Recovery	1	10/22/03 05:05	KPF
2-Fluorobiphenyl	66.7	45-135		% Recovery	1	10/22/03 05:05	KPF
Nitrobenzene-d5	69.8	45-135		% Recovery	1	10/22/03 05:05	KPF
Phenol-d6	62.2	45-135		% Recovery	1	10/22/03 05:05	KPF
Terphenyl-d14	84.2	45-135		% Recovery	1	10/22/03 05:05	KPF

Note for 10/22/03 05:05 analysis: Results are corrected for dry weight.

SW-846 3550B: Ultrasonic Extraction, SV, Solid

Prep Batch ID: 12391 10/21/03 16:00 SBC

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

* - Result is greater than the associated action level

Client: Thomas Matzen
North Wind Environmental, Inc.
545 Shoup Avenue
Idaho Falls, ID 83402
(208) 528-8718

Report Number: 0310136-1
Date Reported: 10/31/03
Work Order: 0310136
Lab Sample ID: 0310136-06A
Client Sample ID: S11SP-03-CNF-A5
Date Collected: 10/21/03
Date Received: 10/21/03 14:30
Matrix: Soil
COC ID:

Project: TEAD SWMU 11
Project ID: TEAD SWMU 11
Purchase Order:

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
ASTM D2216-92: Moisture, Solid							
Percent Moisture	1.97	0.01	0.01	%	1	10/21/03 16:05	SSJ
SW-846 8270C: Semi-Volatiles (USACE), Solid							
Benz(a)anthracene	U	40.8	337	µg/Kg	1	10/22/03 05:34	KPF
Benzo(b)fluoranthene	U	81.6	337	µg/Kg	1	10/22/03 05:34	KPF
Surrogates							
		Recovery Range					
2,4,6-Tribromophenol	120	45-135		% Recovery	1	10/22/03 05:34	KPF
2-Fluorophenol	78.0	45-135		% Recovery	1	10/22/03 05:34	KPF
2-Fluorobiphenyl	78.3	45-135		% Recovery	1	10/22/03 05:34	KPF
Nitrobenzene-d5	80.2	45-135		% Recovery	1	10/22/03 05:34	KPF
Phenol-d6	74.9	45-135		% Recovery	1	10/22/03 05:34	KPF
Terphenyl-d14	87.2	45-135		% Recovery	1	10/22/03 05:34	KPF

Note for 10/22/03 05:34 analysis: Results are corrected for dry weight.

SW-846 3550B: Ultrasonic Extraction, SV, Solid

Prep Batch ID: 12391 10/21/03 16:00 SBC

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

* - Result is greater than the associated action level

Client: Thomas Matzen
North Wind Environmental, Inc.
545 Shoup Avenue
Idaho Falls, ID 83402
(208) 528-8718

Report Number: 0310136-1
Date Reported: 10/31/03
Work Order: 0310136
Lab Sample ID: 0310136-07A
Client Sample ID: S11SP-03-CNF-A6
Date Collected: 10/21/03
Date Received: 10/21/03 14:30
Matrix: Soil
COC ID:

Project: TEAD SWMU 11
Project ID: TEAD SWMU 11
Purchase Order:

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
ASTM D2216-92: Moisture, Solid							
Percent Moisture	1.69	0.01	0.01	%	1	10/21/03 16:05	SSJ
SW-846 8270C: Semi-Volatiles (USACE), Solid							
Benz(a)anthracene	U	40.7	336	µg/Kg	1	10/22/03 06:04	KPF
Benzo(b)fluoranthene	U	81.4	336	µg/Kg	1	10/22/03 06:04	KPF
Surrogates							
		Recovery Range					
2,4,6-Tribromophenol	115	45-135		% Recovery	1	10/22/03 06:04	KPF
2-Fluorophenol	73.6	45-135		% Recovery	1	10/22/03 06:04	KPF
2-Fluorobiphenyl	75.7	45-135		% Recovery	1	10/22/03 06:04	KPF
Nitrobenzene-d5	78.8	45-135		% Recovery	1	10/22/03 06:04	KPF
Phenol-d6	70.0	45-135		% Recovery	1	10/22/03 06:04	KPF
Terphenyl-d14	80.3	45-135		% Recovery	1	10/22/03 06:04	KPF

Note for 10/22/03 06:04 analysis: Results are corrected for dry weight.

SW-846 3550B: Ultrasonic Extraction, SV, Solid

Prep Batch ID: 12391 10/21/03 16:00 SBC

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

* - Result is greater than the associated action level

Client: Thomas Matzen
North Wind Environmental, Inc.
545 Shoup Avenue
Idaho Falls, ID 83402
(208) 528-8718

Report Number: 0310136-1
Date Reported: 10/31/03
Work Order: 0310136
Lab Sample ID: 0310136-08A
Client Sample ID: S11SP-03-CNF-A7
Date Collected: 10/21/03
Date Received: 10/21/03 14:30
Matrix: Soil
COC ID:

Project: TEAD SWMU 11
Project ID: TEAD SWMU 11
Purchase Order:

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
ASTM D2216-92: Moisture, Solid							
Percent Moisture	3.42	0.01	0.01	%	1	10/21/03 16:05	SSJ
SW-846 8270C: Semi-Volatiles (USACE), Solid							
Benz(a)anthracene	U	41.4	342	µg/Kg	1	10/22/03 06:33	KPF
Benzo(b)fluoranthene	U	82.8	342	µg/Kg	1	10/22/03 06:33	KPF
Surrogates							
		Recovery Range					
2,4,6-Tribromophenol	114	45-135		% Recovery	1	10/22/03 06:33	KPF
2-Fluorophenol	69.5	45-135		% Recovery	1	10/22/03 06:33	KPF
2-Fluorobiphenyl	72.8	45-135		% Recovery	1	10/22/03 06:33	KPF
Nitrobenzene-d5	70.6	45-135		% Recovery	1	10/22/03 06:33	KPF
Phenol-d6	66.2	45-135		% Recovery	1	10/22/03 06:33	KPF
Terphenyl-d14	82.2	45-135		% Recovery	1	10/22/03 06:33	KPF

Note for 10/22/03 06:33 analysis: Results are corrected for dry weight.

SW-846 3550B: Ultrasonic Extraction, SV, Solid

Prep Batch ID: 12391 10/21/03 16:00 SBC

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

* - Result is greater than the associated action level

Client: Thomas Matzen
 North Wind Environmental, Inc.
 545 Shoup Avenue
 Idaho Falls, ID 83402
 (208) 528-8718

Report Number: 0310136-1
Date Reported: 10/31/03
Work Order: 0310136
Lab Sample ID: 0310136-09A
Client Sample ID: S11SP-03-CNF-A8
Date Collected: 10/21/03
Date Received: 10/21/03 14:30
Matrix: Soil
COC ID:

Project: TEAD SWMU 11
Project ID: TEAD SWMU 11
Purchase Order:

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
ASTM D2216-92: Moisture, Solid							
Percent Moisture	9.76	0.01	0.01	%	1	10/21/03 16:05	SSJ
SW-846 8270C: Semi-Volatiles (USACE), Solid							
Benz(a)anthracene	U	44.3	366	µg/Kg	1	10/22/03 07:03	KPF
Benzo(b)fluoranthene	U	88.7	366	µg/Kg	1	10/22/03 07:03	KPF
Surrogates		Recovery Range					
2,4,6-Tribromophenol	107	45-135		% Recovery	1	10/22/03 07:03	KPF
2-Fluorophenol	54.9	45-135		% Recovery	1	10/22/03 07:03	KPF
2-Fluorobiphenyl	58.9	45-135		% Recovery	1	10/22/03 07:03	KPF
Nitrobenzene-d5	58.5	45-135		% Recovery	1	10/22/03 07:03	KPF
Phenol-d6	53.7	45-135		% Recovery	1	10/22/03 07:03	KPF
Terphenyl-d14	76.4	45-135		% Recovery	1	10/22/03 07:03	KPF

Note for 10/22/03 07:03 analysis: Results are corrected for dry weight.

SW-846 3550B: Ultrasonic Extraction, SV, Solid

Prep Batch ID: 12391 10/21/03 16:00 SBC

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

* - Result is greater than the associated action level



Quality Control Summary

Client: North Wind Environmental, Inc.
Project: TEAD SWMU 11
Project ID: TEAD SWMU 11

Report Number: 0310136-1
Date Reported: 10/31/03
Work Order: 0310136

ASTM D2216-92: Moisture, Solid

QC Type: Sample Duplicate
Sample ID: 0310129-02A DUP
Run ID: WC_031021D

Analysis Date: 10/21/03 16:05
Prep Batch ID: R39543

Units: %
Seq No: 491950

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD Limit
Percent Moisture	2.89						2.90	0.34 20

QC Type: Sample Duplicate
Sample ID: 0310136-02A DUP
Run ID: WC_031021D

Analysis Date: 10/21/03 16:05
Prep Batch ID: R39543

Units: %
Seq No: 491958

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD Limit
Percent Moisture	6.05						5.89	2.7 20

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

NC - Not Calculated: Duplicate value(s) are less than the MDL



Quality Control Summary

Client: North Wind Environmental, Inc.
Project: TEAD SWMU 11
Project ID: TEAD SWMU 11

Report Number: 0310136-1
Date Reported: 10/31/03
Work Order: 0310136

SW-846 8270C: Semi-Volatiles (USACE), Solid

QC Type: Method Blank
Sample ID: MB-12391
Run ID: HP-5_031021B

Analysis Date: 10/22/03 01:38
Prep Batch ID: 12391

Units: µg/Kg
Seq No: 491854

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD Limit
Benz(a)anthracene	U	0	0	0		40		
Benzo(b)fluoranthene	U	0	0	0		80		
Surrogates								
2,4,6-Tribromophenol	7190	0	6640	108	59	112		
2-Fluorophenol	4600	0	6640	69.3	52	96		
2-Fluorobiphenyl	2350	0	3330	70.6	44	92		
Nitrobenzene-d5	2540	0	3400	74.7	46	100		
Phenol-d6	4460	0	6740	66.1	52	91		
Terphenyl-d14	2650	0	3400	78.0	43	111		

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

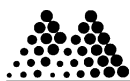
S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

NC - Not Calculated: Duplicate value(s) are less than the MDL

**Quality Control Summary**

Client: North Wind Environmental, Inc.
Project: TEAD SWMU 11
Project ID: TEAD SWMU 11

Report Number: 0310136-1
Date Reported: 10/31/03
Work Order: 0310136

QC Type: Laboratory Control Spike
Sample ID: LCS-12391
Run ID: HP-5_031021B

Analysis Date: 10/22/03 02:08
Prep Batch ID: 12391

Units: µg/Kg
Seq No: 491855

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD Limit
Acenaphthene	2460		3330	73.9	60	140		
4-Chloro-3-methylphenol	2740		3330	82.1	60	140		
2-Chlorophenol	2230		3330	66.9	60	140		
1,4-Dichlorobenzene	1970 S(8a)		3330	59.1	60	140		
2,4-Dinitrotoluene	3400		3330	102	45	140		
N-Nitrosodi-N-propylamine	2080		3330	62.3	45	140		
4-Nitrophenol	3070		3330	92.2	60	140		
Pentachlorophenol	3480		3330	104	45	140		
Phenol	2160		3330	64.7	60	140		
Pyrene	3430		3330	103	60	140		
1,2,4-Trichlorobenzene	2230		3330	66.9	60	140		
Surrogates								
2,4,6-Tribromophenol	7950		6640	120	45	135		
2-Fluorophenol	4160		6640	62.6	45	135		
2-Fluorobiphenyl	2280		3330	68.4	45	135		
Nitrobenzene-d5	2280		3400	67.2	45	135		
Phenol-d6	4110		6740	61.0	45	135		
Terphenyl-d14	2910		3400	85.6	45	135		

8a: See sample comments.

Sample Comments: The LCS recovery for 1,4-Dichlorobenzene may indicate a slight low bias for similar compounds.

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

NC - Not Calculated: Duplicate value(s) are less than the MDL

**Quality Control Summary**

Client: North Wind Environmental, Inc.
Project: TEAD SWMU 11
Project ID: TEAD SWMU 11

Report Number: 0310136-1
Date Reported: 10/31/03
Work Order: 0310136

QC Type: Matrix Spike
Sample ID: 0310136-02AMS
Run ID: HP-5_031021B

Analysis Date: 10/22/03 03:07
Prep Batch ID: 12391

Units: µg/Kg
Seq No: 491857

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD Limit
Acenaphthene	2580	U	3330	77.6	60	140		
4-Chloro-3-methylphenol	2980	U	3330	89.6	60	140		
2-Chlorophenol	2550	U	3330	76.7	60	140		
1,4-Dichlorobenzene	2230	U	3330	66.8	60	140		
2,4-Dinitrotoluene	3500	U	3330	105	45	140		
N-Nitrosodi-N-propylamine	2370	U	3330	71.1	45	140		
4-Nitrophenol	3210	U	3330	96.3	60	140		
Pentachlorophenol	3490	U	3330	105	45	140		
Phenol	2470	U	3330	74.3	60	140		
Pyrene	3390	U	3330	102	60	140		
1,2,4-Trichlorobenzene	2560	U	3330	76.9	60	140		
Surrogates								
2,4,6-Tribromophenol	8440	0	6640	127	45	135		
2-Fluorophenol	4730	0	6640	71.2	45	135		
2-Fluorobiphenyl	2590	0	3330	77.7	45	135		
Nitrobenzene-d5	2590	0	3400	76.3	45	135		
Phenol-d6	4660	0	6740	69.1	45	135		
Terphenyl-d14	2870	0	3400	84.3	45	135		

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

NC - Not Calculated: Duplicate value(s) are less than the MDL



Quality Control Summary

Client: North Wind Environmental, Inc.
Project: TEAD SWMU 11
Project ID: TEAD SWMU 11

Report Number: 0310136-1
Date Reported: 10/31/03
Work Order: 0310136

QC Type: Matrix Spike Duplicate
Sample ID: 0310136-02AMSD
Run ID: HP-5_031021B

Analysis Date: 10/22/03 03:36
Prep Batch ID: 12391

Units: µg/Kg
Seq No: 491875

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Acenaphthene	2550	U	3330	76.5	60	140	2580	1.5	30
4-Chloro-3-methylphenol	2910	U	3330	87.4	60	140	2980	2.4	30
2-Chlorophenol	2590	U	3330	77.6	60	140	2550	1.3	30
1,4-Dichlorobenzene	2320	U	3330	69.6	60	140	2230	4.0	30
2,4-Dinitrotoluene	3510	U	3330	105	45	140	3500	0.22	30
N-Nitrosodi-N-propylamine	2350	U	3330	70.7	45	140	2370	0.66	30
4-Nitrophenol	3190	U	3330	95.7	60	140	3210	0.62	30
Pentachlorophenol	3370	U	3330	101	45	140	3490	3.4	30
Phenol	2420	U	3330	72.7	60	140	2470	2.2	30
Pyrene	3410	U	3330	102	60	140	3390	0.50	30
1,2,4-Trichlorobenzene	2540	U	3330	76.4	60	140	2560	0.61	30
Surrogates									
2,4,6-Tribromophenol	8470	0	6640	128	45	135			
2-Fluorophenol	4770	0	6640	71.9	45	135			
2-Fluorobiphenyl	2510	0	3330	75.4	45	135			
Nitrobenzene-d5	2580	0	3400	76.0	45	135			
Phenol-d6	4580	0	6740	67.9	45	135			
Terphenyl-d14	2970	0	3400	87.3	45	135			

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

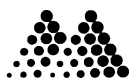
S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

NC - Not Calculated: Duplicate value(s) are less than the MDL

**Quality Control Summary**

Client: North Wind Environmental, Inc.
Project: TEAD SWMU 11
Project ID: TEAD SWMU 11

Report Number: 0310136-1
Date Reported: 10/31/03
Work Order: 0310136

QC Type: Method Blank
Sample ID: MB-12418
Run ID: HP-5_031030A

Analysis Date: 10/30/03 21:31
Prep Batch ID: 12418

Units: µg/L
Seq No: 493674

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD Limit
Benz(a)anthracene	U	0	0	0		1		
Benzo(b)fluoranthene	U	0	0	0		1		
Surrogates								
2,4,6-Tribromophenol	163	0	200	81.3	41	146		
2-Fluorophenol	70.4	0	200	35.2	30	68		
2-Fluorobiphenyl	102 S(8a)	0	100	102	47	97		
Nitrobenzene-d5	122 S(8a)	0	100	122	56	98		
Phenol-d6	50.1	0	200	25.1	23	44		
Terphenyl-d14	81.4	0	100	81.4	37	116		

8a: See sample comments.

Sample Comments: MB had slightly high surrogate recoveries which were isolated to it. Did not affect data.

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

NC - Not Calculated: Duplicate value(s) are less than the MDL



Quality Control Summary

Client: North Wind Environmental, Inc.
Project: TEAD SWMU 11
Project ID: TEAD SWMU 11

Report Number: 0310136-1
Date Reported: 10/31/03
Work Order: 0310136

QC Type: Laboratory Control Spike
Sample ID: LCS-12418
Run ID: HP-5_031030A

Analysis Date: 10/30/03 22:01
Prep Batch ID: 12418

Units: µg/L
Seq No: 493675

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD Limit
Acenaphthene	74.0		100	74.0	56	97		
4-Chloro-3-methylphenol	87.5		100	87.5	61	108		
2-Chlorophenol	71.3		100	71.3	49	98		
1,4-Dichlorobenzene	65.1		100	65.1	39	83		
2,4-Dinitrotoluene	97.2		100	97.2	61	124		
N-Nitrosodi-N-propylamine	81.8		100	81.8	53	102		
4-Nitrophenol	39.6		100	39.6	2	75		
Pentachlorophenol	110		100	110	49	139		
Phenol	33.0		100	33.0	24	49		
Pyrene	90.1		100	90.1	42	115		
1,2,4-Trichlorobenzene	71.7		100	71.7	44	83		
Surrogates								
2,4,6-Tribromophenol	200		200	100	41	146		
2-Fluorophenol	81.9		200	41.0	30	68		
2-Fluorobiphenyl	70.5		100	70.5	47	97		
Nitrobenzene-d5	74.7		100	74.7	56	98		
Phenol-d6	58.0		200	29.0	23	44		
Terphenyl-d14	67.8		100	67.8	37	116		

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

NC - Not Calculated: Duplicate value(s) are less than the MDL

**Quality Control Summary**

Client: North Wind Environmental, Inc.
Project: TEAD SWMU 11
Project ID: TEAD SWMU 11

Report Number: 0310136-1
Date Reported: 10/31/03
Work Order: 0310136

QC Type: Matrix Spike
Sample ID: 0310099-01BMS
Run ID: HP-5_031030A

Analysis Date: 10/30/03 23:59
Prep Batch ID: 12418

Units: µg/L
Seq No: 493678

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD Limit
Acenaphthene	322	U	417	77.3	56	97		
4-Chloro-3-methylphenol	368	U	417	88.4	61	108		
2-Chlorophenol	309	U	417	74.3	49	98		
1,4-Dichlorobenzene	279	U	417	66.8	39	83		
2,4-Dinitrotoluene	407	U	417	97.6	61	124		
N-Nitrosodi-N-propylamine	343	U	417	82.4	53	102		
4-Nitrophenol	193	U	417	46.2	2	75		
Pentachlorophenol	490	U	417	118	49	139		
Phenol	184	U	417	44.3	24	49		
Pyrene	387	U	417	92.8	42	115		
1,2,4-Trichlorobenzene	304	U	417	73.0	44	83		
Surrogates								
2,4,6-Tribromophenol	846	0	833	101	41	146		
2-Fluorophenol	381	0	833	45.7	30	68		
2-Fluorobiphenyl	301	0	417	72.1	47	97		
Nitrobenzene-d5	316	0	417	76.0	56	98		
Phenol-d6	326	0	833	39.1	23	44		
Terphenyl-d14	293	0	417	70.3	37	116		

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

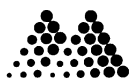
S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

NC - Not Calculated: Duplicate value(s) are less than the MDL

**Quality Control Summary**

Client: North Wind Environmental, Inc.
Project: TEAD SWMU 11
Project ID: TEAD SWMU 11

Report Number: 0310136-1
Date Reported: 10/31/03
Work Order: 0310136

QC Type: Matrix Spike Duplicate
Sample ID: 0310099-01BMSD
Run ID: HP-5_031030A

Analysis Date: 10/31/03 00:29
Prep Batch ID: 12418

Units: µg/L
Seq No: 493679

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Acenaphthene	319	U	417	76.7	56	97	322	0.87	28
4-Chloro-3-methylphenol	364	U	417	87.3	61	108	368	1.2	37
2-Chlorophenol	304	U	417	73.0	49	98	309	1.7	29
1,4-Dichlorobenzene	266	U	417	63.9	39	83	279	4.5	32
2,4-Dinitrotoluene	405	U	417	97.3	61	124	407	0.35	22
N-Nitrosodi-N-propylamine	335	U	417	80.3	53	102	343	2.6	55
4-Nitrophenol	187	U	417	44.8	2	75	193	3.2	47
Pentachlorophenol	497	U	417	119	49	139	490	1.4	49
Phenol	165	U	417	39.6	24	49	184	11	23
Pyrene	381	U	417	91.4	42	115	387	1.4	25
1,2,4-Trichlorobenzene	291	U	417	69.7	44	83	304	4.5	28
Surrogates									
2,4,6-Tribromophenol	833	0	833	100	41	146			
2-Fluorophenol	368	0	833	44.2	30	68			
2-Fluorobiphenyl	288	0	417	69.1	47	97			
Nitrobenzene-d5	309	0	417	74.3	56	98			
Phenol-d6	288	0	833	34.6	23	44			
Terphenyl-d14	287	0	417	68.8	37	116			

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

NC - Not Calculated: Duplicate value(s) are less than the MDL

**Quality Control Summary**

Client: North Wind Environmental, Inc.
Project: TEAD SWMU 11
Project ID: TEAD SWMU 11

Report Number: 0310136-1
Date Reported: 10/31/03
Work Order: 0310136

QC Type: Method Blank
Sample ID: MB-12418
Run ID: HP-5_031030B

Analysis Date: 10/30/03 21:31
Prep Batch ID: 12418

Units: µg/L
Seq No: 493680

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD Limit
Benz(a)anthracene	U	0	0	0		1		
Benzo(b)fluoranthene	U	0	0	0		1		
Surrogates								
2,4,6-Tribromophenol	163	0	200	81.3	41	146		
2-Fluorophenol	70.4	0	200	35.2	30	68		
2-Fluorobiphenyl	102 S(8a)	0	100	102	47	97		
Nitrobenzene-d5	122 S(8a)	0	100	122	56	98		
Phenol-d6	50.1	0	200	25.1	23	44		
Terphenyl-d14	81.4	0	100	81.4	37	116		

8a: See sample comments.

Sample Comments: MB had slightly high surrogate recoveries which may indicate a high bias for similar compounds.

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

NC - Not Calculated: Duplicate value(s) are less than the MDL

**Quality Control Summary**

Client: North Wind Environmental, Inc.
Project: TEAD SWMU 11
Project ID: TEAD SWMU 11

Report Number: 0310136-1
Date Reported: 10/31/03
Work Order: 0310136

QC Type: Laboratory Control Spike
Sample ID: LCS-12418
Run ID: HP-5_031030B

Analysis Date: 10/30/03 22:01
Prep Batch ID: 12418

Units: µg/L
Seq No: 493681

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD Limit
Acenaphthene	74.0		100	74.0	56	97		
4-Chloro-3-methylphenol	87.5		100	87.5	61	108		
2-Chlorophenol	71.3		100	71.3	49	98		
1,4-Dichlorobenzene	65.1		100	65.1	39	83		
2,4-Dinitrotoluene	97.2		100	97.2	61	124		
N-Nitrosodi-N-propylamine	81.8		100	81.8	53	102		
4-Nitrophenol	39.6		100	39.6	2	75		
Pentachlorophenol	110		100	110	49	139		
Phenol	33.0		100	33.0	24	49		
Pyrene	90.1		100	90.1	42	115		
1,2,4-Trichlorobenzene	71.7		100	71.7	44	83		
Surrogates								
2,4,6-Tribromophenol	200		200	100	41	146		
2-Fluorophenol	81.9		200	41.0	30	68		
2-Fluorobiphenyl	70.5		100	70.5	47	97		
Nitrobenzene-d5	74.7		100	74.7	56	98		
Phenol-d6	58.0		200	29.0	23	44		
Terphenyl-d14	67.8		100	67.8	37	116		

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

NC - Not Calculated: Duplicate value(s) are less than the MDL

**Quality Control Summary**

Client: North Wind Environmental, Inc.
Project: TEAD SWMU 11
Project ID: TEAD SWMU 11

Report Number: 0310136-1
Date Reported: 10/31/03
Work Order: 0310136

QC Type: Matrix Spike
Sample ID: 0310099-01BMS
Run ID: HP-5_031030B

Analysis Date: 10/30/03 23:59
Prep Batch ID: 12418

Units: µg/L
Seq No: 493687

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD Limit
Acenaphthene	322	U	417	77.3	56	97		
4-Chloro-3-methylphenol	368	U	417	88.4	61	108		
2-Chlorophenol	309	U	417	74.3	49	98		
1,4-Dichlorobenzene	279	U	417	66.8	39	83		
2,4-Dinitrotoluene	407	U	417	97.6	61	124		
N-Nitrosodi-N-propylamine	343	U	417	82.4	53	102		
4-Nitrophenol	193	U	417	46.2	2	75		
Pentachlorophenol	490	U	417	118	49	139		
Phenol	184	U	417	44.3	24	49		
Pyrene	387	U	417	92.8	42	115		
1,2,4-Trichlorobenzene	304	U	417	73.0	44	83		
Surrogates								
2,4,6-Tribromophenol	846	0	833	101	41	146		
2-Fluorophenol	381	0	833	45.7	30	68		
2-Fluorobiphenyl	301	0	417	72.1	47	97		
Nitrobenzene-d5	316	0	417	76.0	56	98		
Phenol-d6	326	0	833	39.1	23	44		
Terphenyl-d14	293	0	417	70.3	37	116		

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

NC - Not Calculated: Duplicate value(s) are less than the MDL



Quality Control Summary

Client: North Wind Environmental, Inc.
Project: TEAD SWMU 11
Project ID: TEAD SWMU 11

Report Number: 0310136-1
Date Reported: 10/31/03
Work Order: 0310136

QC Type: Matrix Spike Duplicate
Sample ID: 0310099-01BMSD
Run ID: HP-5_031030B

Analysis Date: 10/31/03 00:29
Prep Batch ID: 12418

Units: µg/L
Seq No: 493688

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Acenaphthene	319	U	417	76.7	56	97	322	0.87	28
4-Chloro-3-methylphenol	364	U	417	87.3	61	108	368	1.2	37
2-Chlorophenol	304	U	417	73.0	49	98	309	1.7	29
1,4-Dichlorobenzene	266	U	417	63.9	39	83	279	4.5	32
2,4-Dinitrotoluene	405	U	417	97.3	61	124	407	0.35	22
N-Nitrosodi-N-propylamine	335	U	417	80.3	53	102	343	2.6	55
4-Nitrophenol	187	U	417	44.8	2	75	193	3.2	47
Pentachlorophenol	497	U	417	119	49	139	490	1.4	49
Phenol	165	U	417	39.6	24	49	184	11	23
Pyrene	381	U	417	91.4	42	115	387	1.4	25
1,2,4-Trichlorobenzene	291	U	417	69.7	44	83	304	4.5	28
Surrogates									
2,4,6-Tribromophenol	833	0	833	100	41	146			
2-Fluorophenol	368	0	833	44.2	30	68			
2-Fluorobiphenyl	288	0	417	69.1	47	97			
Nitrobenzene-d5	309	0	417	74.3	56	98			
Phenol-d6	288	0	833	34.6	23	44			
Terphenyl-d14	287	0	417	68.8	37	116			

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

NC - Not Calculated: Duplicate value(s) are less than the MDL

**Quality Control Summary**

Client: North Wind Environmental, Inc.
Project: TEAD SWMU 11
Project ID: TEAD SWMU 11

Report Number: 0310136-1
Date Reported: 10/31/03
Work Order: 0310136

QC Type: TCLP Blank
Sample ID: BF-12377
Run ID: HP-5_031030B

Analysis Date: 10/31/03 01:27
Prep Batch ID: 12401

Units: µg/L
Seq No: 493689

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD Limit
2,4-Dinitrotoluene	U	0	0	0		20		
Hexachlorobenzene	U	0	0	0		3		
Hexachlorobutadiene	U	0	0	0		4		
Hexachloroethane	U	0	0	0		8		
2-Methylphenol (o-Cresol)	U	0	0	0		6		
3 and 4- Methylphenol (m+p cresol)	U	0	0	0		3		
Nitrobenzene	U	0	0	0		3		
Pentachlorophenol	U	0	0	0		30		
2,4,5-Trichlorophenol	U	0	0	0		7		
2,4,6-Trichlorophenol	U	0	0	0		7		
Surrogates								
2,4,6-Tribromophenol	750	0	800	93.7	41	146		
2-Fluorophenol	460	0	800	57.5	30	68		
2-Fluorobiphenyl	241	0	400	60.2	47	97		
Nitrobenzene-d5	273	0	400	68.2	56	98		
Phenol-d6	411 S(8a)	0	800	51.4	23	44		
Terphenyl-d14	293	0	400	73.3	37	116		

8a: See sample comments.

Sample Comments: Sample has high surrogate recovery for Phenol-d6. May indicate a high bias for similar compounds.

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

NC - Not Calculated: Duplicate value(s) are less than the MDL

Date Shipped: Carrier Name: By Hand Airbill: Mountain States Analytical, LLC. Shipped to: Salt Lake City UT 0 -		Chain of Custody Record		For Lab Use Only	
		Relinquished By <i>Mark Plummer 10/21/03 1430</i>	Sampler Signature <i>Alan Cloutman</i>	Lab Contract No: _____	Unit Price: _____ Transfer To: _____ Lab Contract No: _____ Unit Price: _____
		2		Unit Price: _____	
		3		Transfer To: _____	
		4		Lab Contract No: _____	

SAMPLE No.	MATRIX SAMPLER	CONC TYPE	ANALYSIS TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME	FOR LAB USE ONLY Sample Condition On Receipt
S11SP-03-CNF- Soil (0"-12") A1	MSMSD	/G	SVOC 8270C (1)	(Ice Only) (1)	S11SP-03-CNF-A1	S: 10/21/2003 / 1053	
S11SP-03-CNF- Water A10		/G	SVOC 8270C (1)	(Ice Only) (1)	S11SP-03-CNF-A10	S: 10/21/2003 / 1000	
S11SP-03-CNF- Soil (0"-12") A2		/G	SVOC 8270C (1)	(Ice Only) (1)	S11SP-03-CNF-A2	S: 10/21/2003 / 1055	
S11SP-03-CNF- Soil (0"-12") A3		/G	SVOC 8270C (1)	(Ice Only) (1)	S11SP-03-CNF-A3	S: 10/21/2003 / 1058	
S11SP-03-CNF- Soil (0"-12") A4		/G	SVOC 8270C (1)	(Ice Only) (1)	S11SP-03-CNF-A4	S: 10/21/2003 / 1100	
S11SP-03-CNF- Soil (0"-12") A5		/G	SVOC 8270C (1)	(Ice Only) (1)	S11SP-03-CNF-A5	S: 10/21/2003 / 1103	
S11SP-03-CNF- Soil (0"-12") A6		/G	SVOC 8270C (1)	(Ice Only) (1)	S11SP-03-CNF-A6	S: 10/21/2003 / 1105	
S11SP-03-CNF- Soil (0"-12") A7		/G	SVOC 8270C (1)	(Ice Only) (1)	S11SP-03-CNF-A7	S: 10/21/2003 / 1108	
S11SP-03-CNF- Soil (0"-12") A8		/G	SVOC 8270C (1)	(Ice Only) (1)	S11SP-03-CNF-A8	S: 10/21/2003 / 1111	

Shipment for Case Completion: Sample(s) to be used for laboratory QC: <i>S11SP-03-CNF-A1</i> Concentration: L = Low, M = Low/Medium, H = High Type/Designate: Composite = C, Grab = G	Additional Sampler Signature(s): 	Coder Temperature Upon Receipt	Chain of Custody Seal Number:
Analysis Key: SVOC 8270C = SVOC 8270C	Custody Seal Intact? <input type="checkbox"/>	Shipment Recd? <input type="checkbox"/>	

Mountain States Analytical, LLC

Sample Receipt Checklist

Client Name: Northwind Env.
Carrier: Chen

Work Order No. 0310134
Carrier Number: _____

☐ Hand delivered, no cooler ☒ Hand delivered, sample(s) taken out at receiving counter

Cooler Information: Non-Rad ☒ Exempt ☐ White I ☐ Yellow II ☐ Yellow III ☐ ALARA: α _____ / β _____
Ludlum Model 3 Serial # _____ Ludlum Model 2929 Scaler Serial # _____
Smear Results: Cooler: α _____ / β _____ Inner Pkg: α _____ / β _____ Samples: α _____ / β _____
Transport Index (1 meter reading for Yellow II & III only) _____ mR/hr

Cooler Number/ID: Red Surface Radioactivity Reading (if required) _____ mR/hr
Condition of Shipping Container: Good ☒ Fair ☐ Damaged (explain) _____
Cooler Sealed (taped): Yes ☒ No ☐ Not Applicable ☐ PID Reading NA ppm N/A ☒ Hand Delivered
☐ Charging Battery
☐ Out of Service

Custody Seals Present: Yes ☒ No ☐ Not Applicable ☐
Intact ☒ Broken ☐ Seal Number: _____

Coolant: Ice ☒ Blue Ice ☐ None ☐ Other: _____
State of Coolant: Frozen ☒ Partially Frozen ☐ Melted ☐
Thermometer ID: U171 Reading: 8 °C CF: 4 Corrected Temp: _____ °C Temp Blank Included: Yes ☒ No ☐ Exp 10 10/1/03

Packing Description: Sample jars sealed in zip-lock bags, wrapped with absorbent material.

Chain-Of-Custody Information:

COC Present: Yes ☒ No ☐ Other: _____
COC Number(s): _____
COC signed (relinquished and received): Yes ☒ No ☐ Not Applicable ☐
COC agrees with sample labels: Yes ☒ No ☐ Not Applicable ☐
Notes: _____

Sample Information:

Samples included in cooler: SIISP-03-CNF-A1 - A8
SIISP-03-CNF-A10

Custody Seals Present: Yes ☒ No ☐ Not Applicable ☐ Other: _____
Intact ☒ Broken ☐ Seal Number(s) _____

Sample containers intact: Yes ☒ No ☐ Notes: _____
Samples in proper containers: Yes ☒ No ☐
Sufficient sample volume: Yes ☒ No ☐
All samples received in hold time: Yes ☒ No ☐

Water - VOA's have zero headspace: Yes ☐ No ☐ Not Applicable ☒
Pre-preserved with HCl: ☐ Pre-preserved with Na2S2O3: ☐ Non-Preserved: ☐

Notes: _____

Water - pH acceptable upon receipt: Yes ☐ Adjusted (see comments below) ☐ Not Applicable ☒
HNO₃ = _____ H₂SO₄ = _____ NaOH = _____ ZnAC / NaOH = _____ HCL = _____

Water - pH adjusted: (MSA Tracking No.)
HNO₃ _____ H₂SO₄ _____ NaOH _____
ZnAC _____ Na₂S₂O₃ _____ Other _____

Notes: _____

Cooler Contents Inspected & Verified By:

Ram Owen Date: 10/21/03 Time: 1441 Reviewed by: J24 Date: 10.31.03

Appendix F

Quality Control Summary Report

Quality Control Summary Report

SWMU 11 at the Tooele Army Depot

Prepared for:
Sacramento District
U.S. Army Corps of Engineers
Sacramento, California
Contract No. DACW05-00-D-0024, D.O. 006



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Attachment 1—Data Validation Reports

Attachment 2 – Automated Data Review System Reports

Acronyms

CAO	corrective action objective
CDQMP	Chemical Data Quality Management Plan
CMCR	Corrective Measures Completion Report
COC	chain-of-custody
DQO	data quality objective
EPA	Environmental Protection Agency
FTL	field team leader
LCS	Laboratory Control Spike
PDS	Post Dilution Spike
L&V	limitations and validation
MS	matrix spike
MSD	matrix spike duplicate
MSAI	Mountain States Analytical, Inc.
QA	quality assurance
QC	quality control
RPD	relative percent difference
SDG	Sample Delivery Group
SWMU	Solid Waste Management Unit
TEAD	Tooele Army Depot
UDEQ	Utah Department of Environmental Quality
USACE	U.S. Army Corps of Engineers

Quality Control Summary Report

1. QUALITY CONTROL REQUIREMENTS

The work performed in remediation of Solid Waste Management Unit (SWMU) 11 was controlled by plans and procedures for both environmental sampling and analytical work. The requirements for successful completion of the work were carefully analyzed during the preparatory phase of the project. Key requirements documents included the *SWMU 11 Remedial Action Plan* (RAP; AEEC 2002), the *SWMU 11 Sampling and Analysis Plan* (SAP; AEEC 2002) and the *TEAD Chemical Data Quality Management Plan* (CDQMP; USACE 1999).

In addition to up-front identification of quality requirements, North Wind, Inc. prepared for the project by selecting qualified project personnel, conducting training as necessary, and fully briefing all members of the project on the requirements for a successful job. A substantial amount of time was expended scheduling suppliers and services to ensure the necessary tools, equipment, and support would be available to complete the work in the field. North Wind selected Mountain States Analytical, Inc. (MSAI) to analyze the confirmation samples. MSAI was certified by the State of Utah and validated by the United States Army Corps of Engineers (USACE). Prior to the start of fieldwork, North Wind issued a scope of work and technical requirements to the laboratory and tentatively scheduled delivery dates for the samples to ensure rapid turnaround. Severn-Trent Laboratories in Sacramento, California was contracted by the USACE for analysis of the quality assurance (QA) split samples.

The primary data quality objective identified in the SAP was to determine whether soils left in place, following excavation of the five SWMU 11 removal areas, have contaminant concentrations above their respective corrective action objectives (CAOs). The CDQMP also specifies criteria for data quality parameters including precision, accuracy, representativeness, comparability, completeness, and sensitivity. These parameters and specific criteria for each are summarized in Section 6.

2. FIELD QUALITY CONTROL OPERATIONS

During the implementation phase, a dedicated field team leader (FTL) ensured that all work was controlled so that all quality requirements of the governing documents were met. The FTL documented all activities, measurements, and times in a dedicated logbook and kept a photographic record of the work. This documentation is included as appendices to the *Corrective Measures Completion Report* (CMCR; North Wind 2004). The specific field sampling procedures used at SWMU 11 are also described in the CMCR (North Wind 2004).

All samples were hand-delivered to MSAI by North Wind personnel under full chain of custody (COC). All samples arrived at MSAI intact and in good condition. All COC forms were properly completed and signed off. All samples were properly labeled and packaged. 100% of the planned confirmation samples were collected and submitted to the laboratory. Two QA split samples were collected and submitted to the USACE quality assurance laboratory (Severn Trent Laboratories, Sacramento). No QC split samples were submitted to the contractor laboratory (MSAI) per USACE direction.

Samples submitted for semivolatile organic compound (SVOC) analysis required preservation by chilling to 4° C. However, sample temperatures as measured by the laboratory at time of receipt were 8° and 10° C for the two SVOC sample shipments. The laboratory noted that the ice was still frozen,

indicating that the samples were still cooling. It should also be noted that the samples were received at the laboratory approximately three hours after the samples were collected, which is not enough time to chill soil samples with wet ice under typical field conditions.

3. LABORATORY QUALITY CONTROL OPERATIONS

All samples were analyzed using EPA approved methods (EPA 1996a, b). For both metals and SVOC analyses, initial and continuing calibrations, and calibration verifications, were carried out per the method. Post digestion spike recoveries were within limits. Interference check sample criteria were met. Serial dilution results were within acceptance limits. Laboratory quality control (QC) samples included method blanks, sample duplicates, matrix spikes (MSs), matrix spike duplicates (MSDs), and laboratory control spikes. All laboratory QC samples were within required control limits.

4. SUMMARY OF THE PRECISION, ACCURACY, REPRESENTATIVENESS, COMPLETENESS AND COMPARABILITY OF LABORATORY DATA

In accordance with the CDQMP (USACE 1999), the following parameters are to be used for assessing the quality of the measurement data: precision, accuracy, representativeness, completeness and comparability. From an evaluation of these parameters and comparison to criteria provided in the CDQMP, it has been demonstrated that the data are sufficiently accurate and consistent to resolve project Data Quality Objectives (DQOs). A summary of the individual parameters and how the SWMU 11 data met the requirements is provided below.

Table 1 provides the evaluation method and the results for the metals results. Only solid sample results are provided. Two QC runs were reported for sample delivery group 0310117, due to the number of samples in that group. QC results, including laboratory control spikes (LCS), MSs, and MSDs for SVOC compounds were also within CDQMP ranges. These data are not provided in Table 1 due to the number of compounds, but can be found in the analytical reports in Appendix E of the CMCR (North Wind 2004).

Table 1. Summary of PARCC parameter evaluation for SWMU 11 solid samples for metals sample delivery groups.

Parameter	Evaluation Method ^a	Results (%)			Control Limit (%)	Met Limits?
		SDG# 0310117 ^b		SDG# 0310129		
Precision – MS/MSD	$RPD = \frac{ X_1 - X_2 }{(X_1 + X_2/2)} \times 100\%$	As = 18 Pb = 16	As = 18 Pb = 17	As = 4 Pb = 0	35	Yes
Precision – Lab Duplicates	$RPD = \frac{ X_1 - X_2 }{(X_1 + X_2/2)} \times 100\%$	As = 2.6 Pb = 6.2	NC ^c	As = NA Pb = 18	35	Yes
Accuracy – Laboratory Control Spike	$\% R = \frac{MSx}{Sp} \times 100$	As = 96.8 Pb = 90.2	As = 95.4 Pb = 93.8	As = 93 Pb = 94.2	80-120	Yes
Accuracy – MS	$\% R = \frac{MSx - Sx}{Sp} \times 100$	As = 98.9 Pb = 88	As = 97.7 Pb = 90.9	As = 104 Pb = 92.6	75-125	Yes
Accuracy – MSD	$\% R = \frac{MSx - Sx}{Sp} \times 100$	As = 82.9 Pb = 75.7	As = 82 Pb = 77.7	As = 101 Pb = 93.1	75-125	Yes

Parameter	Evaluation Method ^a	Results (%)			Control Limit (%)	Met Limits?
		SDG# 0310117 ^b		SDG# 0310129		
Accuracy – Post Dilution Spike	$\%R = \frac{MSx - Sx}{Sp} \times 100$	As = 103 Pb = 90.7	As = 100 Pb = 92.8	As = 111 Pb = 97.8	75-125	Yes
Representativeness	Qualitative parameter. The sampling design specified by USACE was implemented without deviation.					
Completeness	$C\% = \frac{S}{R}(100\%)$	100		100	90	Yes
Comparability	Qualitative parameter. As required by the Corrective Measures Work Plan (USACE, 2003), standardized field procedures, established and approved analytical methods, consistent reporting conventions, and standard reference materials were used to ensure data comparability.					

a. Descriptions of the evaluation methods are available in the CDQPM (USACE 1999).

b. Sample Delivery Group 0310117 had two QC sample evaluations.

c. NC = value not calculated if one or more parameter results were below method detection limit.

SDG = Sample Delivery Group; As = arsenic; Pb = lead

5. DATA VALIDATION ACTIVITIES

Analytical Quality Solutions performed Level III validation of all metals and SVOC analytical results. In addition, Level IV validation was performed for 10% of the samples. The validation determined that all data packages are suitable for use. There were no identified data quality issues. Attachment 1 provides the data validation worksheets.

6. SUMMARY OF OUTLYING OBSERVATIONS AND IMPACT TO DATA QUALITY OBJECTIVES

There are no outlying sample results. All quality control sample results were within range as required by the CDQMP (USACE 1999).

7. RECOMMENDATIONS FOR DATA USE

These data are considered usable for resolving project DQOs. That is, the data are adequate to conclude that the residual contaminant concentrations do not exceed CAOs.

8. ELECTRONIC DATA ARCHIVAL

The SWMU 11 confirmation sample data, including both field data and chemistry data, have been archived in the USACE Automated Data Review (ADR) system, currently maintained by Synectics in Sacramento, California. The ADR reports for each sample delivery group are provided in Attachment 2.

9. REFERENCES

- American Environmental and Engineering Consultants, LC., (AEEC), 2002, *Final Remedial Action Plan, SWMU 11, Laundry Effluent Pond and Waste Pile Areas*, December.
- EPA, 1996a, "Inductively Coupled Plasma-Atomic Emission Spectrometry," EPA SW-846 Method 6010B, Revision 2, U.S. Environmental Protection Agency, Office of Solid Waste, December 1996.
- EPA, 1996b, "Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS): Capillary column Technique," EPA SW-846 Method 8270C, Revision 3, U.S. Environmental Protection Agency, Office of Solid Waste, December 1996.
- North Wind, 2004, *Draft Corrective Measures Completion Report For The Corrective Measures implementation at Solid Waste Management Unit 11, Laundry Effluent Pond and Waste Pile Areas*, February 2004.
- USACE, 1999, *Chemical Data Quality Management Plan*, Tooele Army Depot, Utah, SIOTE-CO-EO, Revision 2, United States Army Corps of Engineers, June 1999.

Attachment 1

Data Validation Reports for Total Metals and SVOC Analyses

DATA VALIDATION SUMMARY

SWMU11 Data Validation

Package ID NWE-016

Page 1 of 3

DATA PACKAGE INFORMATION

Client:	North Wind Environmental, Inc.
Project:	SWMU11 Data Validation
Data Package ID:	NWE-016
Analysis:	Metals by ICP
Matrix:	Soil
Preparation Method:	SW-846 Method 3050B
Analysis Method:	SW-846 Method 6010B
Laboratory:	Mountain States Analytical, Inc.
Project QAP:	Chemical Data Quality Management Plan (CDQMP) Tooele Army Depot Revision 2 June 1999
Validation guideline:	Chemical Data Quality Management Plan (CDQMP) Tooele Army Depot Revision 2 June 1999
Validation level:	III
Validator:	Gloria Beilke
Date Received:	December 15, 2003
Date Completed:	December 20, 2003
Peer Reviewer:	
Date Reviewed:	

Data Package Inventory			
Run Information		QC Summaries	
X	Final Reports	X	Blank
X	COCs	X	LCS
X	Cal. Summary	X	MS/MSD
X	Cal. Raw Data	X	Sample Duplicates
X	Run Summary		Surrogates
X	Run Raw Data		Internal Stds. (GC)
X	Sample Prep Logs		Tune (GC/MS)
		X	Interfer Chks (ICP)
			PDS (Metals)

Comments: The data submitted are suitable for use, without qualifiers.

SAMPLE INFORMATION

(including duplicate, reanalysis, or dilution samples)

	Sample ID	Lab Number	Sample Date	Prep Date	Analysis Date	Prep Days	Analysis Days	Total Days
1	S11WP1-03-CNF-A1	0310129-02	10/20/2003	10/22/2003	10/23/2003	2	1	3
2	S11WP1-03-CNF-A2	0310129-03	10/20/2003	10/22/2003	10/23/2003	2	1	3
3	S11WP1-03-CNF-A3	0310129-04	10/20/2003	10/22/2003	10/23/2003	2	1	3
4	S11WP1-03-CNF-A4	0310129-05	10/20/2003	10/22/2003	10/23/2003	2	1	3
5	S11WP1-03-CNF-A5	0310129-06	10/20/2003	10/22/2003	10/23/2003	2	1	3
6	S11WP1-03-CNF-A6	0310129-07	10/20/2003	10/22/2003	10/23/2003	2	1	3
7	S11WP1-03-CNF-A7	0310129-08	10/20/2003	10/22/2003	10/23/2003	2	1	3
8	S11WP1-03-CNF-A8	0310129-09	10/20/2003	10/22/2003	10/23/2003	2	1	3
9	S11WP1-03-CNF-A1 MS	0310129-02 MS	10/20/2003	10/22/2003	10/23/2003	2	1	3
10	S11WP1-03-CNF-A1 MSD	0310129-02 MSD	10/20/2003	10/22/2003	10/23/2003	2	1	3
11								
12								

DATA VALIDATION SUMMARY**SWMU11 Data Validation****Package ID NWE-016**

Page 2 of 3

SUMMARY OF FINDINGS

Item	Requirements	Acceptable?	Action Recommended?	Comments
GENERAL QC				
Chain-of-custody	COC and receiving documents properly completed (analytes, method, signatures, etc.)	Y		
Sample Receipt	Samples received in good condition, on ice, with receiving documentation, etc.	Y	N	The cooler was not sealed. The cooler was hand delivered to the laboratory by the client.
Preservatives	Evidence that the samples were correctly preserved.	Y		
Holding Times	Samples analyzed and prepared within method-specified time limits.	Y		
Final Reports	Final reports include all required information such as preparation & analytical methods, preparation & analytical dates, corrected MDLs, signatures, etc.	Y		
Analyte List	Analytes reported consistent with the COC and project requirements.	Y		
Reporting Limits	Reported detection limits low enough for project requirements.	Y		
Analyte / RL Quantitation	Sample preparation and dilution factors correctly accounted for in the final result and RL.	Y		
BATCH/RUN QC				
Initial Calibration	Meets method-specified requirements for frequency of calibration, number of standards, r^2 , etc.	Y		
Continuing Calibration	Performed at required frequency. Recoveries within method/project limits.	Y		
Blanks	Performed at required frequency. Recoveries within method/project limits.	Y		
Laboratory Control Samples	Performed at required frequency. Recoveries within method/project limits.	Y		
Matrix Spike/ Matrix Spike Duplicates	Performed at required frequency. Recoveries within method/project limits. Spiking levels adequate. Matrix interference confirmed, if necessary.	Y		
METHOD QC				
Surrogates (GC, GC/MS)	Performed at required frequency. Recoveries within method/project limits.	N/A		
Internal Standards (GC, ICP/MS)	Performed at required frequency. Recoveries within method/project limits.	N/A		
Interference Checks (ICP)	Performed at required frequency. Results within method/project limits.	Y		
Post Digestion Spike (Metals)	Performed at required frequency. Recoveries within method/project limits.	N/A		
Target Compound Identification (GC, GC/MS)	Performed at required frequency. Recoveries within method/project limits.	N/A		
Analyte Confirmation (GC)	Positive GC results confirmed using a second column or second detector, if necessary	N/A		

DATA VALIDATION SUMMARY

SWMU11 Data Validation

Package ID NWE-016

Page 3 of 3

Item	Requirements	Acceptable?	Action Recommended?	Comments
FIELD QC				
Field Blanks	Performed at required frequency. Recoveries within method/project limits.	N/A		
Field Duplicates	Performed at required frequency. Recoveries within method/project limits.	N/A		
OTHER QC				
Level IV Checks	Transcriptions and calculations correctly performed. (verify at least 10% using extraction logs, sample prep logs, standard prep logs, etc.). Laboratory certification and performance acceptable (verify using lab certifications and audit records, MDL studies, analyst performance studies, etc.).	N/A		Not Requested.
Overall Assessment Of Data	The data is suitable for use, without qualifiers.			

RECOMMENDED ACTIONS

Sample ID	Parameter/Method	Analyte(s)	QC Problem	Recommended Action
N/A	N/A	N/A	N/A	N/A

Validation Flags

- J - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
- N - The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification."
- NJ - The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.
- UJ - The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
- R - The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

DATA VALIDATION SUMMARY

SWMU11 Data Validation

Package ID NWE-015

Page 1 of 3

DATA PACKAGE INFORMATION

Client:	North Wind Environmental, Inc.
Project:	SWMU11 Data Validation
Data Package ID:	NWE-015
Analysis:	Metals by ICP
Matrix:	Soil
Preparation Method:	SW-846 Method 3050B
Analysis Method:	SW-846 Method 6010B
Laboratory:	Mountain States Analytical, Inc.
Project QAP:	Chemical Data Quality Management Plan (CDQMP) Tooele Army Depot Revision 2 June 1999
Validation guideline:	Chemical Data Quality Management Plan (CDQMP) Tooele Army Depot Revision 2 June 1999
Validation level:	IV
Validator:	Gloria Beilke
Date Received:	December 15, 2003
Date Completed:	December 20, 2003
Peer Reviewer:	
Date Reviewed:	

Data Package Inventory			
Run Information		QC Summaries	
X	Final Reports	X	Blank
X	COCs	X	LCS
X	Cal. Summary	X	MS/MSD
X	Cal. Raw Data	X	Sample Duplicates
X	Run Summary		Surrogates
X	Run Raw Data		Internal Stds. (GC)
X	Sample Prep Logs		Tune (GC/MS)
		X	Interfer Chks (ICP)
			PDS (Metals)

Comments: The data submitted are suitable for use, without qualifiers.

SAMPLE INFORMATION

(including duplicate, reanalysis, or dilution samples)

	Sample ID	Lab Number	Sample Date	Prep Date	Analysis Date	Prep Days	Analysis Days	Total Days
1	S11WP2-03-CNF-A1	0310117-08	10/17/2003	10/20/2003	10/21/2003	3	1	4
2	S11WP2-03-CNF-A2	0310117-09	10/17/2003	10/20/2003	10/21/2003	3	1	4
3	S11WP2-03-CNF-A3	0310117-10	10/17/2003	10/20/2003	10/21/2003	3	1	4
4	S11WP2-03-CNF-A4	0310117-11	10/17/2003	10/20/2003	10/21/2003	3	1	4
5	S11WP2-03-CNF-A5	0310117-12	10/17/2003	10/20/2003	10/21/2003	3	1	4
6	S11WP2-03-CNF-A6	0310117-13	10/17/2003	10/20/2003	10/21/2003	3	1	4
7	S11WP2-03-CNF-A7	0310117-14	10/17/2003	10/20/2003	10/21/2003	3	1	4
8	S11WP2-03-CNF-A8	0310117-15	10/17/2003	10/20/2003	10/21/2003	3	1	4
9	S11WP3-03-CNF-A1	0310117-16	10/17/2003	10/20/2003	10/21/2003	3	1	4
10	S11WP3-03-CNF-A2	0310117-17	10/17/2003	10/20/2003	10/21/2003	3	1	4
11	S11WP3-03-CNF-A3	0310117-18	10/17/2003	10/20/2003	10/21/2003	3	1	4
12	S11WP3-03-CNF-A4	0310117-19	10/17/2003	10/20/2003	10/21/2003	3	1	4
13	S11WP3-03-CNF-A5	0310117-20	10/17/2003	10/20/2003	10/21/2003	3	1	4
14	S11WP2-03-CNF-A1 MS	0310117-20	10/17/2003	10/20/2003	10/21/2003	3	1	4
15	S11WP2-03-CNF-A1 MSD	0310117-20	10/17/2003	10/20/2003	10/21/2003	3	1	4
16								

DATA VALIDATION SUMMARY**SWMU11 Data Validation****Package ID NWE-015**

Page 2 of 3

SUMMARY OF FINDINGS

Item	Requirements	Acceptable?	Action Recommended?	Comments
GENERAL QC				
Chain-of-custody	COC and receiving documents properly completed (analytes, method, signatures, etc.)	Y		
Sample Receipt	Samples received in good condition, on ice, with receiving documentation, etc.	Y	N	The cooler was not sealed. The cooler was hand delivered to the laboratory by the client.
Preservatives	Evidence that the samples were correctly preserved.	Y		
Holding Times	Samples analyzed and prepared within method-specified time limits.	Y		
Final Reports	Final reports include all required information such as preparation & analytical methods, preparation & analytical dates, corrected MDLs, signatures, etc.	Y		
Analyte List	Analytes reported consistent with the COC and project requirements.	Y		
Reporting Limits	Reported detection limits low enough for project requirements.	Y		
Analyte / RL Quantitation	Sample preparation and dilution factors correctly accounted for in the final result and RL.	Y		
BATCH/RUN QC				
Initial Calibration	Meets method-specified requirements for frequency of calibration, number of standards, r^2 , etc.	Y		
Continuing Calibration	Performed at required frequency. Recoveries within method/project limits.	Y		
Blanks	Performed at required frequency. Recoveries within method/project limits.	Y		
Laboratory Control Samples	Performed at required frequency. Recoveries within method/project limits.	Y		
Matrix Spike/ Matrix Spike Duplicates	Performed at required frequency. Recoveries within method/project limits. Spiking levels adequate. Matrix interference confirmed, if necessary.	Y		
METHOD QC				
Surrogates (GC, GC/MS)	Performed at required frequency. Recoveries within method/project limits.	N/A		
Internal Standards (GC, ICP/MS)	Performed at required frequency. Recoveries within method/project limits.	N/A		
Interference Checks (ICP)	Performed at required frequency. Results within method/project limits.	Y		
Post Digestion Spike (Metals)	Performed at required frequency. Recoveries within method/project limits.	N/A		
Target Compound Identification (GC, GC/MS)	Performed at required frequency. Recoveries within method/project limits.	N/A		
Analyte Confirmation (GC)	Positive GC results confirmed using a second column or second detector, if necessary	N/A		

DATA VALIDATION SUMMARY

SWMU11 Data Validation

Package ID NWE-015

Page 3 of 3

Item	Requirements	Acceptable?	Action Recommended?	Comments
FIELD QC				
Field Blanks	Performed at required frequency. Recoveries within method/project limits.	N/A		
Field Duplicates	Performed at required frequency. Recoveries within method/project limits.	N/A		
OTHER QC				
Level IV Checks	Transcriptions and calculations correctly performed. (verify at least 10% using extraction logs, sample prep logs, standard prep logs, etc.). Laboratory certification and performance acceptable (verify using lab certifications and audit records, MDL studies, analyst performance studies, etc.).	Y		
Overall Assessment Of Data	The data is suitable for use, without qualifiers.			

RECOMMENDED ACTIONS

Sample ID	Parameter/Method	Analyte(s)	QC Problem	Recommended Action
N/A	N/A	N/A	N/A	N/A

Validation Flags

- J - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
- N - The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification."
- NJ - The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.
- UJ - The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
- R - The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.



REVISED
DATA VALIDATION SUMMARY
SWMU11 Data Validation
Package ID NWE-017

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DATA PACKAGE INFORMATION

<p>Client: North Wind Environmental, Inc.</p> <p>Project: SWMU11 Data Validation</p> <p>Data Package ID: NWE-017</p> <p>Analysis: Semivolatile Organic Compounds by GC/MS</p> <p>Matrix: Soil</p> <p>Preparation Method: SW-846 Method 3550B</p> <p>Analysis Method: SW-846 Method 8270C</p> <p>Laboratory: Mountain States Analytical, Inc.</p> <p>Project QAP: Chemical Data Quality Management Plan (CDQMP) Tooele Army Depot Revision 2 June 1999</p> <p>Validation guideline: Chemical Data Quality Management Plan (CDQMP) Tooele Army Depot Revision 2 June 1999</p> <p>Validation level: III</p> <p>Date Received: December 15, 2003</p> <p>Validator: Gloria Beilke <i>Gloria A. Beilke</i></p> <p>Date Revised: April 19, 2004</p> <p>Peer Reviewer: Joel Workman <i>Joel Workman</i></p> <p>Date Reviewed: April 19, 2004</p>	<table border="1" style="width: 100%; border-collapse: collapse;"><tr><th colspan="4">Data Package Inventory</th></tr><tr><th colspan="2">Run Information</th><th colspan="2">QC Summaries</th></tr><tr><td>X</td><td>Final Reports</td><td>X</td><td>Method Blank</td></tr><tr><td>X</td><td>COCs</td><td>X</td><td>LCS</td></tr><tr><td>X</td><td>Cal. Summary</td><td>X</td><td>MS/MSD</td></tr><tr><td>X</td><td>Cal. Raw Data</td><td></td><td>Sample Duplicates</td></tr><tr><td>X</td><td>Run Summary</td><td>X</td><td>Surrogates</td></tr><tr><td>X</td><td>Run Raw Data</td><td>X</td><td>Internal Stds. (GC)</td></tr><tr><td>X</td><td>Sample Prep Logs</td><td>X</td><td>Tune (GC/MS)</td></tr><tr><td></td><td></td><td></td><td>Interfer Chks (ICP)</td></tr><tr><td></td><td></td><td></td><td>PDS (Metals)</td></tr></table> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"><p>Comments: The data submitted are suitable for use.</p></div>	Data Package Inventory				Run Information		QC Summaries		X	Final Reports	X	Method Blank	X	COCs	X	LCS	X	Cal. Summary	X	MS/MSD	X	Cal. Raw Data		Sample Duplicates	X	Run Summary	X	Surrogates	X	Run Raw Data	X	Internal Stds. (GC)	X	Sample Prep Logs	X	Tune (GC/MS)				Interfer Chks (ICP)				PDS (Metals)
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			Interfer Chks (ICP)																																										
			PDS (Metals)																																										

SAMPLE INFORMATION

(including duplicate, reanalysis, or dilution samples)

	Sample ID	Lab Number	Sample Date	Prep Date	Analysis Date	Prep Days	Analysis Days	Total Days
1	S11SP-03-CNF-A1	0310117-01	10/21/2003	10/21/2003	10/22/2003	0	1	1
2	S11SP-03-CNF-A2	0310117-02	10/21/2003	10/21/2003	10/22/2003	0	1	1
3	S11SP-03-CNF-A3	0310117-03	10/21/2003	10/21/2003	10/22/2003	0	1	1
4	S11SP-03-CNF-A4	0310117-04	10/21/2003	10/21/2003	10/22/2003	0	1	1
5	S11SP-03-CNF-A5	0310117-05	10/21/2003	10/21/2003	10/22/2003	0	1	1
6	S11SP-03-CNF-A6	0310117-06	10/21/2003	10/21/2003	10/22/2003	0	1	1
7	S11SP-03-CNF-A7	0310117-07	10/21/2003	10/21/2003	10/22/2003	0	1	1
8	S11SP-03-CNF-A1 MS	0310117-01 MS	10/21/2003	10/21/2003	10/22/2003	0	1	1
9	S11SP-03-CNF-A1 MSD	0310117-01 MSD	10/21/2003	10/21/2003	10/22/2003	0	1	1
10								
11								



REVISED
DATA VALIDATION SUMMARY
SWMU11 Data Validation
Package ID NWE-017

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SUMMARY OF FINDINGS

Item	Requirements	Acceptable?	Action Recommended	Comments
GENERAL QC				
Chain-of-custody	COC and receiving documents properly completed (analytes, method, signatures, etc.)	Y		
Sample Receipt	Samples received in good condition, on ice, with receiving documentation, etc.	Y	N	<p>The cooler was not sealed. The cooler was hand delivered to the laboratory by the client. The sample temperature was 8°C when received by the laboratory.</p> <p>As per Section 2.3.3 of the CDQMP, "Samples collected and delivered to a laboratory within four hours of collection will be exempted from temperature requirement as long as the samples were handled in accordance with the specified procedures."</p> <p>No further action is needed.</p>
Preservatives	Evidence that the samples were correctly preserved.	Y		
Holding Times	Samples analyzed and prepared within method-specified time limits.	Y		
Final Reports	Final reports include all required information such as preparation & analytical methods, preparation & analytical dates, corrected MDLs, signatures, etc.	Y		
Analyte List	Analytes reported consistent with the COC and project requirements.	Y		
Reporting Limits	Reported detection limits low enough for project requirements.	Y		
Analyte / RL Quantitation	Sample preparation and dilution factors correctly accounted for in the final result and RL.	Y		
BATCH/RUN QC				
Initial Calibration	Meets method-specified requirements for frequency of calibration, number of standards, r^2 , etc.	Y		
Continuing Calibration	Performed at required frequency. Recoveries within method/project limits.	Y		
Method Blanks	Performed at required frequency. Recoveries within method/project limits.	Y		
Laboratory Control Samples	Performed at required frequency. Recoveries within method/project limits.	Y		
Matrix Spike/ Matrix Spike Duplicates	Performed at required frequency. Recoveries within method/project limits. Spiking levels adequate. Matrix interference confirmed, if necessary.	Y		



REVISED
DATA VALIDATION SUMMARY
SWMU11 Data Validation
Package ID NWE-017

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Item	Requirements	Acceptable?	Action Recommended	Comments
METHOD QC				
Surrogates (GC, GC/MS)	Performed at required frequency. Recoveries within method/project limits.	Y		
Internal Standards (GC, ICP/MS)	Performed at required frequency. Recoveries within method/project limits.	Y		
Interference Checks (ICP)	Performed at required frequency. Results within method/project limits.	N/A		
Post Digestion Spike (Metals)	Performed at required frequency. Recoveries within method/project limits.	N/A		
Target Compound Identification (GC, GC/MS)	Performed at required frequency. Recoveries within method/project limits.	Y		
Analyte Confirmation (GC)	Positive GC results confirmed using a second column or second detector, if necessary	N/A		
FIELD QC				
Field Blanks	Performed at required frequency. Recoveries within method/project limits.	N/A		
Field Duplicates	Performed at required frequency. Recoveries within method/project limits.	N/A		
OTHER QC				
Level IV Checks	Transcriptions and calculations correctly performed. (verify at least 10% using extraction logs, sample prep logs, standard prep logs, etc.). Laboratory certification and performance acceptable (verify using lab certifications and audit records, MDL studies, analyst performance studies, etc.).	N/A		Not Requested.
Overall Assessment Of Data	Degradation breakdown recoveries are within acceptable limits. The data is suitable for use.			

RECOMMENDED ACTIONS

Sample ID	Parameter/ Method	Analyte(s)	QC Problem	Recommended Action
N/A	N/A	N/A	N/A	N/A

Validation Flags

- J - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
- N - The analysis indicates the present of an analyte for which there is presumptive evidence to make a "tentative identification."
- NJ - The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.
- UJ - The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
- R - The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.



REVISED
DATA VALIDATION SUMMARY
SWMU11 Data Validation
Package ID NWE-015

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DATA PACKAGE INFORMATION

<p>Client: North Wind Environmental, Inc.</p> <p>Project: SWMU11 Data Validation</p> <p>Data Package ID: NWE-015</p> <p>Analysis: Semivolatile Organic Compounds by GC/MS</p> <p>Matrix: Soil</p> <p>Preparation Method: SW-846 Method 3550B</p> <p>Analysis Method: SW-846 Method 8270C</p> <p>Laboratory: Mountain States Analytical, Inc.</p> <p>Project QAP: Chemical Data Quality Management Plan (CDQMP) Tooele Army Depot Revision 2 June 1999</p> <p>Validation guideline: Chemical Data Quality Management Plan (CDQMP) Tooele Army Depot Revision 2 June 1999</p> <p>Validation level: IV</p> <p>Date Received: December 15, 2003</p> <p>Validator: Gloria Beilke</p> <p>Date Revised: April 19, 2004</p> <p>Peer Reviewer: Joel Workman</p> <p>Date Reviewed: April 19, 2004</p>	<table border="1" style="width: 100%; border-collapse: collapse;"><tr><th colspan="4">Data Package Inventory</th></tr><tr><th colspan="2">Run Information</th><th colspan="2">QC Summaries</th></tr><tr><td>X</td><td>Final Reports</td><td>X</td><td>Method Blank</td></tr><tr><td>X</td><td>COCs</td><td>X</td><td>LCS</td></tr><tr><td>X</td><td>Cal. Summary</td><td>X</td><td>MS/MSD</td></tr><tr><td>X</td><td>Cal. Raw Data</td><td></td><td>Sample Duplicates</td></tr><tr><td>X</td><td>Run Summary</td><td>X</td><td>Surrogates</td></tr><tr><td>X</td><td>Run Raw Data</td><td>X</td><td>Internal Stds. (GC)</td></tr><tr><td>X</td><td>Sample Prep Logs</td><td>X</td><td>Tune (GC/MS)</td></tr><tr><td></td><td></td><td></td><td>Interfer Chks (ICP)</td></tr><tr><td></td><td></td><td></td><td>PDS (Metals)</td></tr></table> <p>Comments: The data submitted are suitable for use.</p>	Data Package Inventory				Run Information		QC Summaries		X	Final Reports	X	Method Blank	X	COCs	X	LCS	X	Cal. Summary	X	MS/MSD	X	Cal. Raw Data		Sample Duplicates	X	Run Summary	X	Surrogates	X	Run Raw Data	X	Internal Stds. (GC)	X	Sample Prep Logs	X	Tune (GC/MS)				Interfer Chks (ICP)				PDS (Metals)
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SAMPLE INFORMATION

(including duplicate, reanalysis, or dilution samples)

	Sample ID	Lab Number	Sample Date	Prep Date	Analysis Date	Prep Days	Analysis Days	Total Days
1	S11LP-03-CNF-A1	0310117-01	10/17/2003	10/20/2003	10/20/2003	3	0	3
2	S11LP-03-CNF-A2	0310117-02	10/17/2003	10/20/2003	10/20/2003	3	0	3
3	S11LP-03-CNF-A3	0310117-03	10/17/2003	10/20/2003	10/20/2003	3	0	3
4	S11LP-03-CNF-A4	0310117-04	10/17/2003	10/20/2003	10/20/2003	3	0	3
5	S11LP-03-CNF-A5	0310117-05	10/17/2003	10/20/2003	10/20/2003	3	0	3
6	S11LP-03-CNF-A6	0310117-06	10/17/2003	10/20/2003	10/20/2003	3	0	3
7	S11LP-03-CNF-A7	0310117-07	10/17/2003	10/20/2003	10/20/2003	3	0	3
8	S11LP-03-CNF-A1 MS	0310117-01 MS	10/17/2003	10/20/2003	10/20/2003	3	0	3
9	S11LP-03-CNF-A1 MSD	0310117-01 MSD	10/17/2003	10/20/2003	10/20/2003	3	0	3
10								
11								



REVISED
DATA VALIDATION SUMMARY
SWMU11 Data Validation
Package ID NWE-015

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SUMMARY OF FINDINGS

Item	Requirements	Acceptable?	Action Recommended	Comments
GENERAL QC				
Chain-of-custody	COC and receiving documents properly completed (analytes, method, signatures, etc.)	Y		
Sample Receipt	Samples received in good condition, on ice, with receiving documentation, etc.	Y	N	<p>The cooler was not sealed. The cooler was hand delivered to the laboratory by the client. The sample temperature was 10°C when received by the laboratory.</p> <p>As per Section 2.3.3 of the CDQMP, "Samples collected and delivered to a laboratory within four hours of collection will be exempted from temperature requirement as long as the samples were handled in accordance with the specified procedures."</p> <p>No further action is needed.</p>
Preservatives	Evidence that the samples were correctly preserved.	Y		
Holding Times	Samples analyzed and prepared within method-specified time limits.	Y		
Final Reports	Final reports include all required information such as preparation & analytical methods, preparation & analytical dates, corrected MDLs, signatures, etc.	Y		
Analyte List	Analytes reported consistent with the COC and project requirements.	Y		
Reporting Limits	Reported detection limits low enough for project requirements.	Y		
Analyte / RL Quantitation	Sample preparation and dilution factors correctly accounted for in the final result and RL.	Y		
BATCH/RUN QC				
Initial Calibration	Meets method-specified requirements for frequency of calibration, number of standards, r^2 , etc.	Y		
Continuing Calibration	Performed at required frequency. Recoveries within method/project limits.	Y		
Method Blanks	Performed at required frequency. Recoveries within method/project limits.	Y		
Laboratory Control Samples	Performed at required frequency. Recoveries within method/project limits.	Y		
Matrix Spike/ Matrix Spike Duplicates	Performed at required frequency. Recoveries within method/project limits. Spiking levels adequate. Matrix interference confirmed, if necessary.	Y		



REVISED
DATA VALIDATION SUMMARY
SWMU11 Data Validation
Package ID NWE-015

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Item	Requirements	Acceptable?	Action Recommended?	Comments
METHOD QC				
Surrogates (GC, GC/MS)	Performed at required frequency. Recoveries within method/project limits.	Y		
Internal Standards (GC, ICP/MS)	Performed at required frequency. Recoveries within method/project limits.	Y		
Interference Checks (ICP)	Performed at required frequency. Results within method/project limits.	N/A		
Post Digestion Spike (Metals)	Performed at required frequency. Recoveries within method/project limits.	N/A		
Target Compound Identification (GC, GC/MS)	Performed at required frequency. Recoveries within method/project limits.	Y		
Analyte Confirmation (GC)	Positive GC results confirmed using a second column or second detector, if necessary	N/A		
FIELD QC				
Field Blanks	Performed at required frequency. Recoveries within method/project limits.	N/A		
Field Duplicates	Performed at required frequency. Recoveries within method/project limits.	N/A		
OTHER QC				
Level IV Checks	Transcriptions and calculations correctly performed. (verify at least 10% using extraction logs, sample prep logs, standard prep logs, etc.). Laboratory certification and performance acceptable (verify using lab certifications and audit records, MDL studies, analyst performance studies, etc.).	Y		
Overall Assessment Of Data	Degradation breakdown recoveries are within acceptable limits. The data is suitable for use.			

RECOMMENDED ACTIONS

Sample ID	Parameter/ Method	Analyte(s)	QC Problem	Recommended Action
N/A	N/A	N/A	N/A	N/A

Validation Flags

- J - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
- N - The analysis indicates the present of an analyte for which there is presumptive evidence to make a "tentative identification."
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- R - The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

Attachment 2

Automated Data Review System Reports

AUTOMATED DATA REVIEW SUMMARY

Facility: SWMU 11
Event: SWMU 11
Contract: 9T9H213C 9T9H213C
Sample Delivery Group: 0310117

Field Contractor: North Wind Environmental, Inc., Idaho Falls, ID
Laboratory Contractor: Mountain States Analytical, Salt Lake City, UT
Data Review Contractor: Synectics, Sacramento, CA
Guidance Document: *Final, Rev.1, Sampling and Analysis Plan, SWMU11, Tooele Army depot, Tooele, Utah, 7/21/03*

Analytical Method	Normal Samples	Field QC Samples
SW6010B	13	-
SW8270C	7	-

This report assesses the analytical data quality associated with the analyses listed on the preceding cover page. This assessment has been made through a combination of automated data review (ADR) and supplemental manual review, the details of which are described below. The approach taken in the review of this data set is consistent with the requirements contained in Final, Rev.1, Sampling and Analysis Plan, SWMU11, Tooele Army depot, Tooele, Utah, 7/21/03 to the extent possible. Where definitive guidance is not provided, data has been evaluated in a conservative manner using professional judgment. In cases where two qualifiers are listed as an action, such as "J/UJ", the first qualifier applies to positive results, and the second to non-detect results.

Samples were collected by North Wind Environmental, Inc., Idaho Falls, ID; analyses were performed by Mountain States Analytical, Salt Lake City, UT and were reported under sample delivery group (SDG) 0310117. Results have been evaluated electronically using electronic data deliverables (EDDs) provided by the laboratory. The laboratory data summary forms (hard copy) have been reviewed during this effort and compared to the automated review output. Findings based on the automated data submission and manual data verification processes are detailed in the ADR narrative. The following quality control elements were evaluated during this review effort:

- Technical Holding Times
- Continuing Calibration Verification
- Method Blank Contamination
- Field Blank Contamination
- Blank Spike Accuracy
- Blank Spike Precision
- Matrix Spike Accuracy
- Matrix Spike Precision
- Surrogate Recovery
- Laboratory Duplicate Precision
- Field Duplicate Precision

A minimum of ten percent of sample and QC results were manually evaluated for compliance with project specific requirements and consistency with hard copy results. The following reports were generated during the evaluation of this data set and are presented as attachments to this report as applicable.

Data Submission Warnings – Warnings encountered during the data submission process are evaluated and their affect on data quality is discussed in the narrative.

Batch – The analytical batch report is reviewed for completeness and compliance with project specific requirements. Incomplete or non-compliant run sequences are identified and their impact on data quality are discussed in the narrative.

QC Outlier – Results exceeding the evaluation criteria are reviewed for compliance with project requirements and a minimum of ten percent of the non-compliant QC values reported electronically are verified for consistency with hard-copy values.

Qualified Results – Qualified results are evaluated for compliance with project requirements and ten percent of qualified results are verified for consistency with the QC Outlier Report.

Field Duplicate – Field duplicate comparison results are evaluated for compliance with project requirements and ten percent of values reported are verified for consistency with the hard-copy data.

Rejected Results – All rejected results are evaluated for compliance with project requirements. The reason for rejection of the data is verified against hard copy data.

Analytical deficiencies, project non-compliance issues and inconsistencies with hard copy results observed during ADR evaluation process and their impact on data quality are summarized in the ADR narrative.

Out of control events experienced by the laboratory have warranted the qualification of 0 % (0 results) and the rejection of 0 % (0 results) of the data set. These deficiencies are detailed in the referenced attachments, and discussed in the ADR narrative, where appropriate.

Released by

Date

Batch Report

Facility: SWMU 11
Lab: MSSL
Filename: 0310117
Status: **Certified - 12/18/2003**
User: DennisLeeke

Test Method: SW6010B
Prep Method: TOTAL
Leach Method: NONE

<u>Test Batch</u>	<u>Prep Batch</u>	<u>Leach Batch</u>	<u>Location</u>	<u>Matrix</u>	<u>Field Sample ID</u>	<u>Lab Sample ID</u>	<u>Test Date and Time</u>	<u>Sample Type</u>
39520	12381	NA	LABQC	SQ		PBW12381	10/21/2003 11:15:00AM	LB2
	12381	NA	LABQC	SQ		LCSW12381	10/21/2003 11:19:00AM	BS2
	12381	NA	SWMU11-CS-13	SO	S11WP2-03-CNF-A1	0310117-08A	10/21/2003 11:23:00AM	N1
	12381	NA	SWMU11-CS-13	SO	S11WP2-03-CNF-A1	031011708AMS	10/21/2003 11:30:00AM	MS1
	12381	NA	SWMU11-CS-13	SO	S11WP2-03-CNF-A1	031011708AMS	10/21/2003 11:33:00AM	SD1
	12381	NA	SWMU11-CS-14	SO	S11WP2-03-CNF-A2	0310117-09A	10/21/2003 12:07:00PM	N1
	12381	NA	SWMU11-CS-15	SO	S11WP2-03-CNF-A3	0310117-10A	10/21/2003 12:12:00PM	N1
	12381	NA	SWMU11-CS-16	SO	S11WP2-03-CNF-A4	0310117-11A	10/21/2003 12:16:00PM	N1
	12381	NA	SWMU11-CS-17	SO	S11WP2-03-CNF-A5	0310117-12A	10/21/2003 12:20:00PM	N1
	12381	NA	SWMU11-CS-18	SO	S11WP2-03-CNF-A6	0310117-13A	10/21/2003 12:25:00PM	N1
	12381	NA	SWMU11-CS-19	SO	S11WP2-03-CNF-A7	0310117-14A	10/21/2003 12:29:00PM	N1
	12381	NA	SWMU11-CS-20	SO	S11WP2-03-CNF-A8	0310117-15A	10/21/2003 12:33:00PM	N1
	12381	NA	SWMU11-CS-08	SO	S11WP3-03-CNF-A1	0310117-16A	10/21/2003 12:38:00PM	N1
	12381	NA	SWMU11-CS-09	SO	S11WP3-03-CNF-A2	0310117-17A	10/21/2003 12:51:00PM	N1
	12381	NA	SWMU11-CS-10	SO	S11WP3-03-CNF-A3	0310117-18A	10/21/2003 12:55:00PM	N1
	12381	NA	SWMU11-CS-11	SO	S11WP3-03-CNF-A4	0310117-19A	10/21/2003 12:59:00PM	N1
	12381	NA	SWMU11-CS-12	SO	S11WP3-03-CNF-A5	0310117-20A	10/21/2003 1:04:00PM	N1

Batch Report

Facility: SWMU 11
Lab: MSSL
Filename: 0310117
Status: **Certified - 12/18/2003**
User: DennisLeeke

Test Method: SW8270C
Prep Method: SW3550
Leach Method: NONE

<u>Test Batch</u>	<u>Prep Batch</u>	<u>Leach Batch</u>	<u>Location</u>	<u>Matrix</u>	<u>Field Sample ID</u>	<u>Lab Sample ID</u>	<u>Test Date and Time</u>	<u>Sample Type</u>
39505	12380	NA	LABQC	SQ		MB12380	10/20/2003 6:33:00PM	LB2
	12380	NA	LABQC	SQ		LCS12380	10/20/2003 7:04:00PM	BS2
	12380	NA	SWMU11-CS-01	SO	S11LP-03-CNF-A1	0310117-01A	10/20/2003 8:35:00PM	N1
	12380	NA	SWMU11-CS-01	SO	S11LP-03-CNF-A1	031011701AMS	10/20/2003 9:06:00PM	MS1
	12380	NA	SWMU11-CS-01	SO	S11LP-03-CNF-A1	031011701AMS	10/20/2003 9:37:00PM	SD1
	12380	NA	SWMU11-CS-02	SO	S11LP-03-CNF-A2	0310117-02A	10/20/2003 10:08:00PM	N1
	12380	NA	SWMU11-CS-03	SO	S11LP-03-CNF-A3	0310117-03A	10/20/2003 10:39:00PM	N1
	12380	NA	SWMU11-CS-04	SO	S11LP-03-CNF-A4	0310117-04A	10/20/2003 11:10:00PM	N1
	12380	NA	SWMU11-CS-05	SO	S11LP-03-CNF-A5	0310117-05A	10/20/2003 11:41:00PM	N1
	12380	NA	SWMU11-CS-06	SO	S11LP-03-CNF-A6	0310117-06A	10/21/2003 12:12:00AM	N1
	12380	NA	SWMU11-CS-07	SO	S11LP-03-CNF-A7	0310117-07A	10/21/2003 12:43:00AM	N1

Detected Results

Facility: SWMU 11
 Event: SWMU 11
 Reference: ISSS-539-01

SDG: 0310117

Trace Metals by ICP

<u>Test/Leach</u>	<u>Matrix</u>	<u>Field Sample ID</u>	<u>Type</u>	<u>Analyte</u>	<u>RL</u>	<u>Lab Result</u>	<u>Qualified Result</u>	<u>Units</u>	<u>Reason</u>
SW6010B/NONE	SO	S11WP2-03-CNF-A1	N	Arsenic	7.9	4.2	4.2 J	MG/KG	TR
SW6010B/NONE	SO	S11WP2-03-CNF-A1	N	Lead	7.9	2.4	2.4 J	MG/KG	TR
SW6010B/NONE	SO	S11WP2-03-CNF-A2	N	Arsenic	8.1	6.4	6.4 J	MG/KG	TR
SW6010B/NONE	SO	S11WP2-03-CNF-A2	N	Lead	8.1	28	28	MG/KG	
SW6010B/NONE	SO	S11WP2-03-CNF-A3	N	Arsenic	8.1	3.4	3.4 J	MG/KG	TR
SW6010B/NONE	SO	S11WP2-03-CNF-A3	N	Lead	8.1	2.6	2.6 J	MG/KG	TR
SW6010B/NONE	SO	S11WP2-03-CNF-A4	N	Arsenic	8.3	5.5	5.5 J	MG/KG	TR
SW6010B/NONE	SO	S11WP2-03-CNF-A4	N	Lead	8.3	7.1	7.1 J	MG/KG	TR
SW6010B/NONE	SO	S11WP2-03-CNF-A5	N	Arsenic	7.9	4.0	4.0 J	MG/KG	TR
SW6010B/NONE	SO	S11WP2-03-CNF-A5	N	Lead	7.9	2.7	2.7 J	MG/KG	TR
SW6010B/NONE	SO	S11WP2-03-CNF-A6	N	Arsenic	7.9	6.8	6.8 J	MG/KG	TR
SW6010B/NONE	SO	S11WP2-03-CNF-A6	N	Lead	7.9	10	10	MG/KG	
SW6010B/NONE	SO	S11WP2-03-CNF-A7	N	Arsenic	7.9	3.2	3.2 J	MG/KG	TR
SW6010B/NONE	SO	S11WP2-03-CNF-A7	N	Lead	7.9	2.3	2.3 J	MG/KG	TR
SW6010B/NONE	SO	S11WP2-03-CNF-A8	N	Arsenic	7.8	4.5	4.5 J	MG/KG	TR
SW6010B/NONE	SO	S11WP2-03-CNF-A8	N	Lead	7.8	2.2	2.2 J	MG/KG	TR
SW6010B/NONE	SO	S11WP3-03-CNF-A1	N	Arsenic	8.0	5.9	5.9 J	MG/KG	TR
SW6010B/NONE	SO	S11WP3-03-CNF-A1	N	Lead	8.0	3.3	3.3 J	MG/KG	TR
SW6010B/NONE	SO	S11WP3-03-CNF-A2	N	Arsenic	7.8	4.6	4.6 J	MG/KG	TR
SW6010B/NONE	SO	S11WP3-03-CNF-A2	N	Lead	7.8	3.2	3.2 J	MG/KG	TR
SW6010B/NONE	SO	S11WP3-03-CNF-A3	N	Arsenic	7.7	3.3	3.3 J	MG/KG	TR
SW6010B/NONE	SO	S11WP3-03-CNF-A3	N	Lead	7.7	4.0	4.0 J	MG/KG	TR
SW6010B/NONE	SO	S11WP3-03-CNF-A4	N	Arsenic	7.5	4.5	4.5 J	MG/KG	TR
SW6010B/NONE	SO	S11WP3-03-CNF-A4	N	Lead	7.5	2.5	2.5 J	MG/KG	TR
SW6010B/NONE	SO	S11WP3-03-CNF-A5	N	Arsenic	7.9	5.2	5.2 J	MG/KG	TR
SW6010B/NONE	SO	S11WP3-03-CNF-A5	N	Lead	7.9	3.1	3.1 J	MG/KG	TR

SDG: 0310117

Semivolatile Organic Compounds by Capillary GC/MS

<u>Test/Leach</u>	<u>Matrix</u>	<u>Field Sample ID</u>	<u>Type</u>	<u>Analyte</u>	<u>RL</u>	<u>Lab Result</u>	<u>Qualified Result</u>	<u>Units</u>	<u>Reason</u>
SW8270C/NONE	SO	S11LP-03-CNF-A1	N	bis(2-Ethylhexyl) Phthalate	350	120	120 J	UG/KG	TR
SW8270C/NONE	SO	S11LP-03-CNF-A2	N	bis(2-Ethylhexyl) Phthalate	380	470	470	UG/KG	
SW8270C/NONE	SO	S11LP-03-CNF-A3	N	bis(2-Ethylhexyl) Phthalate	350	140	140 J	UG/KG	TR
SW8270C/NONE	SO	S11LP-03-CNF-A4	N	bis(2-Ethylhexyl) Phthalate	370	590	590	UG/KG	
SW8270C/NONE	SO	S11LP-03-CNF-A5	N	bis(2-Ethylhexyl) Phthalate	370	120	120 J	UG/KG	TR
SW8270C/NONE	SO	S11LP-03-CNF-A7	N	bis(2-Ethylhexyl) Phthalate	1,800	2,500	2,500	UG/KG	

Qualified Results

Facility: SWMU 11
 Event: SWMU 11
 Reference: ISSS-539-01

SDG: 0310117

Trace Metals by ICP

Test/Leach	Matrix	Field Sample ID	Type	Analyte	RL	Lab Result	Qualified Result	Units	Reason
SW6010B/NONE	SO	S11WP2-03-CNF-A1	N	Arsenic	7.9	4.2	4.2 J	MG/KG	TR
SW6010B/NONE	SO	S11WP2-03-CNF-A1	N	Lead	7.9	2.4	2.4 J	MG/KG	TR
SW6010B/NONE	SO	S11WP2-03-CNF-A2	N	Arsenic	8.1	6.4	6.4 J	MG/KG	TR
SW6010B/NONE	SO	S11WP2-03-CNF-A3	N	Arsenic	8.1	3.4	3.4 J	MG/KG	TR
SW6010B/NONE	SO	S11WP2-03-CNF-A3	N	Lead	8.1	2.6	2.6 J	MG/KG	TR
SW6010B/NONE	SO	S11WP2-03-CNF-A4	N	Arsenic	8.3	5.5	5.5 J	MG/KG	TR
SW6010B/NONE	SO	S11WP2-03-CNF-A4	N	Lead	8.3	7.1	7.1 J	MG/KG	TR
SW6010B/NONE	SO	S11WP2-03-CNF-A5	N	Arsenic	7.9	4.0	4.0 J	MG/KG	TR
SW6010B/NONE	SO	S11WP2-03-CNF-A5	N	Lead	7.9	2.7	2.7 J	MG/KG	TR
SW6010B/NONE	SO	S11WP2-03-CNF-A6	N	Arsenic	7.9	6.8	6.8 J	MG/KG	TR
SW6010B/NONE	SO	S11WP2-03-CNF-A7	N	Arsenic	7.9	3.2	3.2 J	MG/KG	TR
SW6010B/NONE	SO	S11WP2-03-CNF-A7	N	Lead	7.9	2.3	2.3 J	MG/KG	TR
SW6010B/NONE	SO	S11WP2-03-CNF-A8	N	Arsenic	7.8	4.5	4.5 J	MG/KG	TR
SW6010B/NONE	SO	S11WP2-03-CNF-A8	N	Lead	7.8	2.2	2.2 J	MG/KG	TR
SW6010B/NONE	SO	S11WP3-03-CNF-A1	N	Arsenic	8.0	5.9	5.9 J	MG/KG	TR
SW6010B/NONE	SO	S11WP3-03-CNF-A1	N	Lead	8.0	3.3	3.3 J	MG/KG	TR
SW6010B/NONE	SO	S11WP3-03-CNF-A2	N	Arsenic	7.8	4.6	4.6 J	MG/KG	TR
SW6010B/NONE	SO	S11WP3-03-CNF-A2	N	Lead	7.8	3.2	3.2 J	MG/KG	TR
SW6010B/NONE	SO	S11WP3-03-CNF-A3	N	Arsenic	7.7	3.3	3.3 J	MG/KG	TR
SW6010B/NONE	SO	S11WP3-03-CNF-A3	N	Lead	7.7	4.0	4.0 J	MG/KG	TR
SW6010B/NONE	SO	S11WP3-03-CNF-A4	N	Arsenic	7.5	4.5	4.5 J	MG/KG	TR
SW6010B/NONE	SO	S11WP3-03-CNF-A4	N	Lead	7.5	2.5	2.5 J	MG/KG	TR
SW6010B/NONE	SO	S11WP3-03-CNF-A5	N	Arsenic	7.9	5.2	5.2 J	MG/KG	TR
SW6010B/NONE	SO	S11WP3-03-CNF-A5	N	Lead	7.9	3.1	3.1 J	MG/KG	TR

SDG: 0310117

Semivolatile Organic Compounds by Capillary GC/MS

<u>Test/Leach</u>	<u>Matrix</u>	<u>Field Sample ID</u>	<u>Type</u>	<u>Analyte</u>	<u>RL</u>	<u>Lab Result</u>	<u>Qualified Result</u>	<u>Units</u>	<u>Reason</u>
SW8270C/NONE	SO	S11LP-03-CNF-A1	N	bis(2-Ethylhexyl) Phthalate	350	120	120 J	UG/KG	TR
SW8270C/NONE	SO	S11LP-03-CNF-A3	N	bis(2-Ethylhexyl) Phthalate	350	140	140 J	UG/KG	TR
SW8270C/NONE	SO	S11LP-03-CNF-A5	N	bis(2-Ethylhexyl) Phthalate	370	120	120 J	UG/KG	TR

AUTOMATED DATA REVIEW SUMMARY

Facility: SWMU 11
Event: SWMU 11
Contract: 9T9H213C 9T9H213C
Sample Delivery Group: 0310129

Field Contractor: North Wind Environmental, Inc., Idaho Falls, ID
Laboratory Contractor: Mountain States Analytical, Salt Lake City, UT
Data Review Contractor: Synectics, Sacramento, CA
Guidance Document: *Final, Rev.1, Sampling and Analysis Plan, SWMU11, Tooele Army depot, Tooele, Utah, 7/21/03*

Analytical Method	Normal Samples	Field QC Samples
SW6010B	8	-

This report assesses the analytical data quality associated with the analyses listed on the preceding cover page. This assessment has been made through a combination of automated data review (ADR) and supplemental manual review, the details of which are described below. The approach taken in the review of this data set is consistent with the requirements contained in Final, Rev.1, Sampling and Analysis Plan, SWMU11, Tooele Army depot, Tooele, Utah, 7/21/03 to the extent possible. Where definitive guidance is not provided, data has been evaluated in a conservative manner using professional judgment. In cases where two qualifiers are listed as an action, such as "J/UJ", the first qualifier applies to positive results, and the second to non-detect results.

Samples were collected by North Wind Environmental, Inc., Idaho Falls, ID; analyses were performed by Mountain States Analytical, Salt Lake City, UT and were reported under sample delivery group (SDG) 0310129. Results have been evaluated electronically using electronic data deliverables (EDDs) provided by the laboratory. The laboratory data summary forms (hard copy) have been reviewed during this effort and compared to the automated review output. Findings based on the automated data submission and manual data verification processes are detailed in the ADR narrative. The following quality control elements were evaluated during this review effort:

- Technical Holding Times
- Continuing Calibration Verification
- Method Blank Contamination
- Field Blank Contamination
- Blank Spike Accuracy
- Blank Spike Precision
- Matrix Spike Accuracy
- Matrix Spike Precision
- Surrogate Recovery
- Laboratory Duplicate Precision
- Field Duplicate Precision

A minimum of ten percent of sample and QC results were manually evaluated for compliance with project specific requirements and consistency with hard copy results. The following reports were generated during the evaluation of this data set and are presented as attachments to this report as applicable.

Data Submission Warnings – Warnings encountered during the data submission process are evaluated and their affect on data quality is discussed in the narrative.

Batch – The analytical batch report is reviewed for completeness and compliance with project specific requirements. Incomplete or non-compliant run sequences are identified and their impact on data quality are discussed in the narrative.

QC Outlier – Results exceeding the evaluation criteria are reviewed for compliance with project requirements and a minimum of ten percent of the non-compliant QC values reported electronically are verified for consistency with hard-copy values.

Qualified Results – Qualified results are evaluated for compliance with project requirements and ten percent of qualified results are verified for consistency with the QC Outlier Report.

Field Duplicate – Field duplicate comparison results are evaluated for compliance with project requirements and ten percent of values reported are verified for consistency with the hard-copy data.

Rejected Results – All rejected results are evaluated for compliance with project requirements. The reason for rejection of the data is verified against hard copy data.

Analytical deficiencies, project non-compliance issues and inconsistencies with hard copy results observed during ADR evaluation process and their impact on data quality are summarized in the ADR narrative.

Out of control events experienced by the laboratory have warranted the qualification of 0 % (0 results) and the rejection of 0 % (0 results) of the data set. These deficiencies are detailed in the referenced attachments, and discussed in the ADR narrative, where appropriate.

Released by

Date

Batch Report

Facility: SWMU 11
Lab: MSSL
Filename: 0310129
Status: **Certified - 12/18/2003**
User: DennisLeeke

Test Method: SW6010B
Prep Method: TOTAL
Leach Method: NONE

<u>Test Batch</u>	<u>Prep Batch</u>	<u>Leach Batch</u>	<u>Location</u>	<u>Matrix</u>	<u>Field Sample ID</u>	<u>Lab Sample ID</u>	<u>Test Date and Time</u>	<u>Sample Type</u>
39571	12394	NA	LABQC	SQ		PBW12394	10/23/2003 3:03:00PM	LB2
	12394	NA	LABQC	SQ		LCSW12394	10/23/2003 3:06:00PM	BS2
	12394	NA	SWMU11-CS-21	SO	S11WP1-03-CNF-A1	0310129-02A	10/23/2003 3:11:00PM	N1
	12394	NA	SWMU11-CS-21	SO	S11WP1-03-CNF-A1	031012902AMS	10/23/2003 3:19:00PM	MS1
	12394	NA	SWMU11-CS-21	SO	S11WP1-03-CNF-A1	031012902AMS	10/23/2003 3:22:00PM	SD1
	12394	NA	SWMU11-CS-22	SO	S11WP1-03-CNF-A2	0310129-03A	10/23/2003 3:46:00PM	N1
	12394	NA	SWMU11-CS-23	SO	S11WP1-03-CNF-A3	0310129-04A	10/23/2003 3:51:00PM	N1
	12394	NA	SWMU11-CS-24	SO	S11WP1-03-CNF-A4	0310129-05A	10/23/2003 3:56:00PM	N1
	12394	NA	SWMU11-CS-25	SO	S11WP1-03-CNF-A5	0310129-06A	10/23/2003 4:01:00PM	N1
	12394	NA	SWMU11-CS-26	SO	S11WP1-03-CNF-A6	0310129-07A	10/23/2003 4:06:00PM	N1
	12394	NA	SWMU11-CS-27	SO	S11WP1-03-CNF-A7	0310129-08A	10/23/2003 4:11:00PM	N1
	12394	NA	SWMU11-CS-28	SO	S11WP1-03-CNF-A8	0310129-09A	10/23/2003 4:16:00PM	N1

Detected Results

Facility: SWMU 11
Event: SWMU 11
Reference: ISSS-539-01

SDG: 0310129

Trace Metals by ICP

<u>Test/Leach</u>	<u>Matrix</u>	<u>Field Sample ID</u>	<u>Type</u>	<u>Analyte</u>	<u>RL</u>	<u>Lab Result</u>	<u>Qualified Result</u>	<u>Units</u>	<u>Reason</u>
SW6010B/NONE	SO	S11WP1-03-CNF-A1	N	Lead	7.9	2.9	2.9 J	MG/KG	TR
SW6010B/NONE	SO	S11WP1-03-CNF-A2	N	Arsenic	8.4	1.8	1.8 J	MG/KG	TR
SW6010B/NONE	SO	S11WP1-03-CNF-A2	N	Lead	8.4	3.1	3.1 J	MG/KG	TR
SW6010B/NONE	SO	S11WP1-03-CNF-A3	N	Arsenic	8.9	3.7	3.7 J	MG/KG	TR
SW6010B/NONE	SO	S11WP1-03-CNF-A3	N	Lead	8.9	2.8	2.8 J	MG/KG	TR
SW6010B/NONE	SO	S11WP1-03-CNF-A4	N	Arsenic	7.6	2.2	2.2 J	MG/KG	TR
SW6010B/NONE	SO	S11WP1-03-CNF-A4	N	Lead	7.6	2.8	2.8 J	MG/KG	TR
SW6010B/NONE	SO	S11WP1-03-CNF-A5	N	Arsenic	7.6	2.1	2.1 J	MG/KG	TR
SW6010B/NONE	SO	S11WP1-03-CNF-A5	N	Lead	7.6	2.5	2.5 J	MG/KG	TR
SW6010B/NONE	SO	S11WP1-03-CNF-A6	N	Arsenic	8.0	2.8	2.8 J	MG/KG	TR
SW6010B/NONE	SO	S11WP1-03-CNF-A6	N	Lead	8.0	3.2	3.2 J	MG/KG	TR
SW6010B/NONE	SO	S11WP1-03-CNF-A7	N	Arsenic	8.0	1.7	1.7 J	MG/KG	TR
SW6010B/NONE	SO	S11WP1-03-CNF-A7	N	Lead	8.0	3.7	3.7 J	MG/KG	TR
SW6010B/NONE	SO	S11WP1-03-CNF-A8	N	Arsenic	7.7	3.5	3.5 J	MG/KG	TR
SW6010B/NONE	SO	S11WP1-03-CNF-A8	N	Lead	7.7	2.7	2.7 J	MG/KG	TR

Qualified Results

Facility: SWMU 11
Event: SWMU 11
Reference: ISSS-539-01

SDG: 0310129

Trace Metals by ICP

<u>Test/Leach</u>	<u>Matrix</u>	<u>Field Sample ID</u>	<u>Type</u>	<u>Analyte</u>	<u>RL</u>	<u>Lab Result</u>	<u>Qualified Result</u>	<u>Units</u>	<u>Reason</u>
SW6010B/NONE	SO	S11WP1-03-CNF-A1	N	Lead	7.9	2.9	2.9 J	MG/KG	TR
SW6010B/NONE	SO	S11WP1-03-CNF-A2	N	Arsenic	8.4	1.8	1.8 J	MG/KG	TR
SW6010B/NONE	SO	S11WP1-03-CNF-A2	N	Lead	8.4	3.1	3.1 J	MG/KG	TR
SW6010B/NONE	SO	S11WP1-03-CNF-A3	N	Arsenic	8.9	3.7	3.7 J	MG/KG	TR
SW6010B/NONE	SO	S11WP1-03-CNF-A3	N	Lead	8.9	2.8	2.8 J	MG/KG	TR
SW6010B/NONE	SO	S11WP1-03-CNF-A4	N	Arsenic	7.6	2.2	2.2 J	MG/KG	TR
SW6010B/NONE	SO	S11WP1-03-CNF-A4	N	Lead	7.6	2.8	2.8 J	MG/KG	TR
SW6010B/NONE	SO	S11WP1-03-CNF-A5	N	Arsenic	7.6	2.1	2.1 J	MG/KG	TR
SW6010B/NONE	SO	S11WP1-03-CNF-A5	N	Lead	7.6	2.5	2.5 J	MG/KG	TR
SW6010B/NONE	SO	S11WP1-03-CNF-A6	N	Arsenic	8.0	2.8	2.8 J	MG/KG	TR
SW6010B/NONE	SO	S11WP1-03-CNF-A6	N	Lead	8.0	3.2	3.2 J	MG/KG	TR
SW6010B/NONE	SO	S11WP1-03-CNF-A7	N	Arsenic	8.0	1.7	1.7 J	MG/KG	TR
SW6010B/NONE	SO	S11WP1-03-CNF-A7	N	Lead	8.0	3.7	3.7 J	MG/KG	TR
SW6010B/NONE	SO	S11WP1-03-CNF-A8	N	Arsenic	7.7	3.5	3.5 J	MG/KG	TR
SW6010B/NONE	SO	S11WP1-03-CNF-A8	N	Lead	7.7	2.7	2.7 J	MG/KG	TR

Batch Report

Facility: SWMU 11
Lab: MSSL
Filename: 0310136
Status: **Certified - 12/18/2003**
User: DennisLeeke

Test Method: SW8270C
Prep Method: SW3550
Leach Method: NONE

<u>Test Batch</u>	<u>Prep Batch</u>	<u>Leach Batch</u>	<u>Location</u>	<u>Matrix</u>	<u>Field Sample ID</u>	<u>Lab Sample ID</u>	<u>Test Date and Time</u>	<u>Sample Type</u>
39539	12391	NA	LABQC	SQ		MB12391	10/22/2003 1:38:00AM	LB2
	12391	NA	LABQC	SQ		LCS12391	10/22/2003 2:08:00AM	BS2
	12391	NA	SWMU11-CS-29	SO	S11SP-03-CNF-A1	0310136-02A	10/22/2003 2:37:00AM	N1
	12391	NA	SWMU11-CS-29	SO	S11SP-03-CNF-A1	031013602AMS	10/22/2003 3:07:00AM	MS1
	12391	NA	SWMU11-CS-29	SO	S11SP-03-CNF-A1	031013602AMS	10/22/2003 3:36:00AM	SD1
	12391	NA	SWMU11-CS-30	SO	S11SP-03-CNF-A2	0310136-03A	10/22/2003 4:06:00AM	N1
	12391	NA	SWMU11-CS-31	SO	S11SP-03-CNF-A3	0310136-04A	10/22/2003 4:35:00AM	N1
	12391	NA	SWMU11-CS-32	SO	S11SP-03-CNF-A4	0310136-05A	10/22/2003 5:05:00AM	N1
	12391	NA	SWMU11-CS-33	SO	S11SP-03-CNF-A5	0310136-06A	10/22/2003 5:34:00AM	N1
	12391	NA	SWMU11-CS-34	SO	S11SP-03-CNF-A6	0310136-07A	10/22/2003 6:04:00AM	N1
	12391	NA	SWMU11-CS-35	SO	S11SP-03-CNF-A7	0310136-08A	10/22/2003 6:33:00AM	N1
	12391	NA	SWMU11-CS-36	SO	S11SP-03-CNF-A8	0310136-09A	10/22/2003 7:03:00AM	N1

Appendix G

Disposal Documentation

Engineering Design File

Hazardous Waste Determination for SWMU 11 at the Tooele Army Depot

Prepared for:
Sacramento District
U.S. Army Corps of Engineers
Sacramento, California
By North Wind, Inc. under contract No.
DACW05-00-D-0024, D.O. 004



HAZARDOUS WASTE DETERMINATION

1. Project File No.: 2052.006 2. Project/Task: USACE TEAD SWMU 11

3. Subtask: Disposal

4. Title: Hazardous Waste Determination for SWMU 11

5. Summary:

To implement the corrective measures for SWMU 11, North Wind will remove contaminated soil from the waste pile areas, sewage lagoon and laundry effluent pond to meet health-based standards under the RCRA Corrective Action program.

This Engineering Design File documents the Hazardous Waste Determination for the waste generated during this corrective action. The HWD complies with requirements of 40 CFR 262.11 and Utah R315-5-1.11 for determining whether or not the material is a hazardous waste.

The determination is that the SWMU 11 corrective measures will generate only non-RCRA regulated wastes.

Attachment 1 contains the Mountain States Analytical Laboratory Reports.

6. Distribution (complete package):

Project File 2052.004

Distribution (summary package only):

7. Review (R) and Approval (A) Signatures:

	R/A	Typed Name/Organization	Signature	Date
Performer	R	A. Armstrong, North Wind		
Independent Reviewer	R	J. Medeiros, North Wind		
Requestor	A	T. Matzen, North Wind		
Generator	A	Larry McFarland, US Army		

Engineering Design File	HAZARDOUS WASTE DETERMINATION FOR SWMU 11, TEAD	Identifier: NW-ID-2003-070 Revision: 0 Page: 1 of 6
North Wind, Inc.: (208) 528-8718		Date: September 2003

1. BACKGROUND

The SWMU 11 Laundry Effluent Pond and Waste Pile Areas are located in the central portion of TEAD in the center of the ammunition storage area. The laundry effluent pond and waste pile areas to be excavated consist of the effluent pond, sewage pond, and three waste piles. Laundry and shower discharges from Building 1267 were sent to the bermed, unlined laundry effluent pond from 1947 to 1990, and boiler blow-down was discharged there until 1995. The bermed, unlined sewage pond was constructed between 1978 and 1980 but never used. The sewage pond may have received flows emanating from a possible leach field associated with the septic tank. Currently neither pond contains water except for ephemeral water due to rain or snowmelt.

The waste piles lie to the east of the laundry effluent and sewage ponds. The area was identified due to the presence of waste on the ground surface. The waste piles contained wood fragments, metal banding, electrical wiring, metal shavings, and old automobile parts (brake drums, brake pads, and oil filters). Much of the surface debris was removed during the spring of 1993 and so the exact number of waste piles is difficult to determine. The current expression of the former piles is fine metallic debris, and forms little more than a slight rise in the topography.

2. WASTE DESCRIPTION

The waste streams included in this evaluation are described in Table 1.

Table 1. Description of waste streams evaluated under this hazardous waste determination.

Waste Stream	Quantity	Description
Soil	700-1000 tons	Soil excavated from the ditch, consisting of silt, sand, gravels and cobbles with some vegetation. The soil is known to contain heavy metals that were discharged in an aqueous solution during historic operations. The soil may also contain up to 5 wt % debris such as vegetation, roots, etc. that may be removed from the SWMU during the removal action. This also includes plastic sheeting, used PPE, and other refuse generated during the removal action.

Engineering Design File	HAZARDOUS WASTE DETERMINATION FOR SWMU 11, TEAD	Identifier: NW-ID-2003-070 Revision: 0 Page: 2 of 6
North Wind, Inc.: (208) 528-8718		Date: September 2003

3. HAZARDOUS WASTE DETERMINATION

3.1 Solid Waste Under 261.2?

The soil waste stream, as described above, does not technically meet the definition of solid waste under 40 CFR 261.2 because it is considered environmental media (soil, groundwater, surface water and sediments are considered environmental media). However, the waste can be subject to all applicable RCRA hazardous waste requirements if it contains listed hazardous constituents or if it exhibits a characteristic of hazardous waste.

3.2 Excluded Under 40 CFR 261.4?

This waste does not meet the exclusion requirements under 40 CFR 261.4

3.3 Listed RCRA Waste Under 40 CFR 261 Subpart D?

Based on a description of generating processes and previous sampling results summarized in the Corrective Measures Work Plan (AEEC 2002), there is no indication that any VOCs were present at this site. The waste material from the SWMU 11 site is not known to contain any listed hazardous waste as defined in 40 CFR 261 Subpart D.

3.4 Characteristic RCRA Waste Under 40 CFR 261 Subpart C?

The soil waste stream evaluated in this document is considered contaminated environmental media. Therefore, although it does not meet the definition of a solid waste, it is nevertheless regulated under EPA's contained-in policy. Because there are no known process-listed wastes (261 Subpart D wastes) at this site, the only concern is whether this waste stream exhibits the characteristic of hazardous waste as identified in 40 CFR 261 Subpart C.

3.4.1 261.21 (Ignitability): The waste does not exhibit the characteristic of ignitability listed under subsection 261.21. Ignitability is defined as being (1) liquid, other than an aqueous solution less than 24% alcohol by volume and has a flash point less than 60°C (140°F), (2) not a liquid and capable under standard temperature and pressure of causing fire through friction, absorption of moisture or spontaneous chemical changes, (3) an ignitable compressed gas, or (4) an oxidizer.

3.4.2 261.22 (Corrosivity): The waste does not meet the definition of corrosivity under 261.22 because the waste material is not aqueous or a liquid. The waste does not meet EPA's definition for the corrosive characteristic because the waste is a solid (soil). Furthermore, EPA has

Engineering Design File	HAZARDOUS WASTE DETERMINATION FOR SWMU 11, TEAD	Identifier: NW-ID-2003-070 Revision: 0 Page: 3 of 6
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clarified that “Method 9045 [pH test for solids] is not to be used for corrosivity characteristic determinations” (EPA 1995).

3.4.3 261.23 (Reactivity): The waste does not exhibit any of the characteristics of reactivity listed under subsection 261.23.

3.4.4 261.24 (Toxicity): To evaluate the potential for toxicity, representative samples were obtained from the area to be excavated and analyzed for RCRA metals by the Toxicity Characteristic Leaching Procedure (SW 846 Method 1311). The sampling strategy selected by the USACE, in consultation with UDEQ, was to divide the excavation area into a number of grid blocks, each containing less than 85 cubic yards of soil in place. Five-point composite samples were then collected from each grid block at multiple depths using hand augers. A Field Sampling Plan was developed per EPA guidance to document the waste characterization sampling (North Wind 2003).

Analytical results from each sample represent the average leachable concentration of contaminants within a given grid block. To determine whether the waste contains a characteristic hazardous waste, the TCLP results are compared to the subpart C toxicity characteristic values in 40 CFR 261.24 (Table 2). The determination is that waste removed from the SWMU 11 excavation areas will not be identified as characteristic waste and will not carry characteristic waste codes.

Engineering Design File	HAZARDOUS WASTE DETERMINATION FOR SWMU 11, TEAD	Identifier: NW-ID-2003-070 Revision: 0 Page: 4 of 6
North Wind, Inc.: (208) 528-8718		Date: September 2003

Table 2. Comparison of the TCLP sample results to the RCRA toxicity characteristic values.

TCLP Sample Results ¹ (mg/L)															
CAS #	Analyte	RCRA Limit (mg/L)	Grid-block ²												
			SP A1	SP B1	LP A1	LP B1	WP1 A1	WP1 A2	WP1 B1	WP2 A1	WP2 A2	WP2 B1	WP3 A1	WP3 A2	WP3 B1
7440382	Arsenic	5.0	ND ³	0.06	0.034	ND	0.037	0.085	ND	0.036	0.064	ND	ND	ND	ND
7440393	Barium	100.0	0.844	0.931	0.81	0.687	0.815	0.675	0.866	0.692	0.797	0.808	0.705	0.722	0.924
7440439	Cadmium	1.0	0.0087	0.004	0.0378	0.0429	0.0076	0.0066	ND	0.0068	0.0071	ND	0.0043	0.0036	ND
7440473	Chromium	5.0	0.011	0.013	0.016	0.012	ND	ND	ND	0.029	ND	ND	ND	ND	ND
7439921	Lead	5.0	0.422	0.036	0.069	0.552	0.07	0.087	0.032	0.036	0.065	0.042	ND	ND	0.067
7439976	Mercury	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
7782492	Selenium	1.0	ND	ND	ND	0.066	0.058	ND	0.057	ND	ND	ND	ND	ND	ND
7440224	Silver	5.0	0.0081	0.0091	0.0096	0.0074	ND	0.005	0.0097	0.0078	0.0081	0.0085	0.0052	0.0079	0.009
Characteristic?:			No	No	No	No	No	No	No	No	No	No	No	No	No

¹ Laboratory reports are available in Attachment 1.

² Sampling grid blocks were sized to represent less than 85 cubic yards of soil each. The prefix “A” represents the uppermost layer, “B” represents the lower, over-excavation layer as defined in the Work Plan (AEEC 2002).

ND = non-detect, concentration is below analytical method detection limits. SP = Sewage Pond; LP = Laundry Pond; WP = Waste Pile

Engineering Design File	HAZARDOUS WASTE DETERMINATION FOR SWMU 11, TEAD	Identifier: NW-ID-2003-070 Revision: 0 Page: 5 of 6
North Wind, Inc.: (208) 528-8718		Date: September 2003

3.5 LDR Determination

As the soil to be removed from SWMU 11 is not a hazardous waste, the material is not restricted from land disposal and does not require treatment prior to disposal.

3.6 TSCA Determination

There is no knowledge that TSCA regulated constituents were released to the SWMU 11 excavation areas.

4. WASTE STORAGE LOCATION

It is anticipated that the soil material covered by this determination will be loaded and transported to a treatment and disposal facility as it is generated without temporary on-site accumulation.

5. WASTE DISPOSAL

The hazardous waste material will be disposed of at a permitted disposal facility. It is anticipated that the hazardous waste will be transported to the Clean Harbors Grassy Mountain, Utah site, or alternatively to the U.S. Ecology Grandview, Idaho site. Non-regulated wastes will be disposed of at either a Subtitle D or Subtitle C facility, depending on availability.

6. REFERENCES

AEEC, 2002, Final Remedial Action Plan SWMU 11 – Laundry Effluent Pond And Waste Pile Areas, December 2002.

EPA, 1995, Federal Register Notice April 4, 1995, 60 FR 17003.

North Wind, 2003, Abbreviated Field Sampling Plan for In Situ Waste Characterization, Tooele Army Depot Solid Waste Management Units 11 and 25, NW-ID-2003-041, Revision 1, July 2003.

Engineering Design File	HAZARDOUS WASTE DETERMINATION FOR SWMU 11, TEAD	Identifier: NW-ID-2003-070 Revision: 0 Page: 6 of 6
North Wind, Inc.: (208) 528-8718		Date: September 2003

Attachment 1

Mountain States Analytical, SWMU 11 Waste Characterization Sampling

Analytical Report No. 0308156-2 September 19, 2003

September 19, 2003

Thomas Matzen
North Wind Environmental, Inc.
545 Shoup Avenue
Idaho Falls, ID 83402
(208) 528-8718 Fax:

Project: TEAD SWMU 11

Work Order: 0308156

Dear Thomas Matzen,

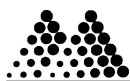
Thank you for using Mountain States Analytical, LLC (MSA) as your environmental information resource. Our reports are designed to meet the Certified Laboratory Reporting Requirements of Utah Administrative Code R444-14-12(10) and the National Environmental Laboratory Accreditation Program (NELAP), Section 5.13.

This is Report Number 0308156-2 and contains 26 pages of information for the 13 samples submitted to MSA on Wednesday, August 20, 2003. Any sample receipt documentation detailed in the Work Order Receipt Summary of this report (e.g., Chain-of-Custody, Work Order Authorization, etc.) and/or analytical results noted as "see attached " are included by reference as attachments following page 26. For regulatory compliance reporting, individual pages or portions of this report may not be separated. Except as noted, the test results for the methods and parameters listed on MSA's most recent NELAC certification letter meet all requirements of NELAC.

If you have any questions regarding the information contained in this report, please feel free to contact me at (800)973-6724 ext. 3026 or by e-mail at rlarsen@msalabs.net.

Mountain States Analytical, LLC

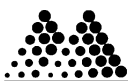
Rolf E. Larsen
Senior Project Manager



Sample Summary

Client: North Wind Environmental, Inc.**Project:** TEAD SWMU 11**Project ID:****Report Number:** 0308156-2**Date Reported:** 09/19/03**Work Order:** 0308156

Lab Sample ID	Client Sample ID	Additional Sample Information	Matrix	Date Collected
0308156-01A	S11-SP-03-CHR-A1-1		Soil	08/19/03
0308156-01B	SDG: NWE-010			09/18/03
0308156-02A	S11-SP-03-CHR-B1-1		Soil	08/19/03
0308156-03A	S11-LP-03-CHR-A1-1		Soil	08/19/03
0308156-04A	S11-LP-03-CHR-B1-1		Soil	08/19/03
0308156-05A	S11-WP1-03-CHR-A1-1		Soil	08/20/03
0308156-06A	S11-WP1-03-CHR-A2-1		Soil	08/20/03
0308156-07A	S11-WP1-03-CHR-B1-1		Soil	08/20/03
0308156-08A	S11-WP2-03-CHR-A1-1		Soil	08/19/03
0308156-09A	S11-WP2-03-CHR-A2-1		Soil	08/19/03
0308156-10A	S11-WP2-03-CHR-B1-1		Soil	08/19/03
0308156-11A	S11-WP3-03-CHR-A1-1		Soil	08/20/03
0308156-12A	S11-WP3-03-CHR-A2-1		Soil	08/20/03
0308156-13A	S11-WP3-03-CHR-B1-1		Soil	08/20/03



Holding Time Summary

Client: North Wind Environmental, Inc.
Project: TEAD SWMU 11
Project ID:

Report Number: 0308156-2
Date Reported: 09/19/03
Work Order: 0308156

Sample ID	Client Sample ID	Date Collected						
0308156-01A	S11-SP-03-CHR-A1-1	08/19/03 15:45						
Leachate								
Parameter	Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT	
Mercury by CVAA, TCLP	09/02/03 15:20	09/03/03 08:20	28	09/03/03 15:30		09/04/03 14:58	28	
Metals by hrICP (USACE)	09/02/03 15:20	09/03/03 08:20	180	09/04/03 08:20		09/18/03 14:13	180	
0308156-02A	S11-SP-03-CHR-B1-1	08/19/03 15:50						
Leachate								
Parameter	Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT	
Mercury by CVAA, TCLP	09/02/03 15:20	09/03/03 08:20	28	09/03/03 15:30		09/04/03 15:00	28	
Metals by hrICP (USACE)	09/02/03 15:20	09/03/03 08:20	180	09/04/03 08:20		09/18/03 14:18	180	
0308156-03A	S11-LP-03-CHR-A1-1	08/19/03 15:00						
Leachate								
Parameter	Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT	
Mercury by CVAA, TCLP	09/02/03 15:20	09/03/03 08:20	28	09/03/03 15:30		09/04/03 15:01	28	
Metals by hrICP (USACE)	09/02/03 15:20	09/03/03 08:20	180	09/04/03 08:20		09/18/03 14:23	180	
0308156-04A	S11-LP-03-CHR-B1-1	08/19/03 15:10						
Leachate								
Parameter	Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT	
Mercury by CVAA, TCLP	09/02/03 15:20	09/03/03 08:20	28	09/03/03 15:30		09/04/03 15:03	28	
Metals by hrICP (USACE)	09/02/03 15:20	09/03/03 08:20	180	09/04/03 08:20		09/18/03 14:27	180	
0308156-05A	S11-WP1-03-CHR-A1-1	08/20/03 07:50						
Leachate								
Parameter	Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT	
Mercury by CVAA, TCLP	09/02/03 15:20	09/03/03 08:20	28	09/03/03 15:30		09/04/03 15:04	28	
Metals by hrICP (USACE)	09/02/03 15:20	09/03/03 08:20	180	09/04/03 08:20		09/18/03 14:32	180	
0308156-06A	S11-WP1-03-CHR-A2-1	08/20/03 08:00						
Leachate								
Parameter	Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT	
Mercury by CVAA, TCLP	09/02/03 15:20	09/03/03 08:20	28	09/03/03 15:30		09/04/03 15:06	28	
Metals by hrICP (USACE)	09/02/03 15:20	09/03/03 08:20	180	09/04/03 08:20		09/18/03 14:36	180	

* - The recommended holding time was exceeded



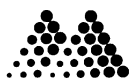
Holding Time Summary

Client: North Wind Environmental, Inc.
Project: TEAD SWMU 11
Project ID:

Report Number: 0308156-2
Date Reported: 09/19/03
Work Order: 0308156

Sample ID	Client Sample ID	Date Collected						
0308156-07A	S11-WP1-03 CHR-B1-1	08/20/03 08:10						
Leachate								
Parameter	Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT	
Mercury by CVAA, TCLP	09/02/03 15:20	09/03/03 08:20	28	09/03/03 15:30		09/04/03 15:07		28
Metals by hrICP (USACE)	09/02/03 15:20	09/03/03 08:20	180	09/04/03 08:20		09/18/03 14:41		180
0308156-08A	S11-WP2-03-CHR-A1-1	08/19/03 17:35						
Leachate								
Parameter	Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT	
Mercury by CVAA, TCLP	09/02/03 15:20	09/03/03 08:20	28	09/03/03 15:30		09/04/03 15:09		28
Metals by hrICP (USACE)	09/02/03 15:20	09/03/03 08:20	180	09/04/03 08:20		09/18/03 14:46		180
0308156-09A	S11-WP2-03-CHR-A2-1	08/19/03 17:40						
Leachate								
Parameter	Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT	
Mercury by CVAA, TCLP	09/02/03 15:20	09/03/03 08:20	28	09/03/03 15:30		09/04/03 15:10		28
Metals by hrICP (USACE)	09/02/03 15:20	09/03/03 08:20	180	09/04/03 08:20		09/18/03 14:50		180
0308156-10A	S11-WP2-03-CHR-B1-1	08/19/03 17:55						
Leachate								
Parameter	Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT	
Mercury by CVAA, TCLP	09/02/03 15:20	09/03/03 08:20	28	09/03/03 15:30		09/04/03 15:15		28
Metals by hrICP (USACE)	09/02/03 15:20	09/03/03 08:20	180	09/04/03 08:20		09/18/03 15:04		180
0308156-11A	S11-WP3-03-CHR-A1-1	08/20/03 08:35						
Leachate								
Parameter	Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT	
Mercury by CVAA, TCLP	09/02/03 15:20	09/03/03 08:20	28	09/03/03 15:30		09/04/03 14:44		28
Metals by hrICP (USACE)	09/02/03 15:20	09/03/03 08:20	180	09/04/03 08:20		09/18/03 13:32		180
0308156-12A	S11-WP3-03-CHR-A2-1	08/20/03 08:45						
Leachate								
Parameter	Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT	
Mercury by CVAA, TCLP	09/02/03 15:20	09/03/03 08:20	28	09/03/03 15:30		09/04/03 15:16		28

* - The recommended holding time was exceeded



Holding Time Summary

Client: North Wind Environmental, Inc.

Project: TEAD SWMU 11

Project ID:

Report Number: 0308156-2

Date Reported: 09/19/03

Work Order: 0308156

Sample ID	Client Sample ID	Date Collected						
Metals by hrICP (USACE)		09/02/03 15:20	09/03/03 08:20	180	09/04/03 08:20		09/18/03 15:09	180
0308156-13A	S11-WP3-03-CHR-B1-1	08/20/03 08:55						
Leachate								
Parameter		Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT
Mercury by CVAA, TCLP		09/02/03 15:20	09/03/03 08:20	28	09/03/03 15:30		09/04/03 15:18	28
Metals by hrICP (USACE)		09/02/03 15:20	09/03/03 08:20	180	09/04/03 08:20		09/18/03 15:14	180

* - The recommended holding time was exceeded

Client: Thomas Matzen
North Wind Environmental, Inc.
545 Shoup Avenue
Idaho Falls, ID 83402
(208) 528-8718

Report Number: 0308156-2
Date Reported: 09/19/03
Work Order: 0308156
Lab Sample ID: 0308156-01A
Client Sample ID: S11-SP-03-CHR-A1-1
Date Collected: 08/19/03
Date Received: 08/20/03 13:30
Matrix: Soil
COC ID: 27344

Project: TEAD SWMU 11
Project ID:
Purchase Order:

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 1311: TCLP Extraction, Metals, Solid							
Prep Batch ID: 12053						09/02/03 15:20	DBW
Note for 09/02/03 15:20 analysis: 100% solids							
SW-846 1311: TCLP Extraction, Mercury, Solid							
Prep Batch ID: 12052						09/02/03 15:20	DBW
Note for 09/02/03 15:20 analysis: 100% solids							
SW-846 3010A: Flame/hrICP Prep, Extract							
Prep Batch ID: 12077						09/04/03 08:20	BBO
SW-846 7470A: Mercury by CVAA, TCLP, Extract							
Mercury	U	1	5	µg/L	1	09/04/03 14:58	LC
SW-846 7470A: Mercury Prep CVAA, Extract							
Prep Batch ID: 12073					10	09/03/03 15:30	TM
SW-846 6010B: Metals by hrICP (USACE), Extract							
Arsenic	U	0.03	0.15	mg/L	1	09/18/03 14:13	JMR
Barium	0.844	0.003	0.015	mg/L	1	09/18/03 14:13	JMR
Cadmium	0.0087 J	0.003	0.015	mg/L	1	09/18/03 14:13	JMR
Chromium	0.011 J	0.01	0.05	mg/L	1	09/18/03 14:13	JMR
Lead	0.422	0.03	0.15	mg/L	1	09/18/03 14:13	JMR
Nickel	0.043 J	0.02	0.1	mg/L	1	09/18/03 14:13	JMR
Selenium	U	0.05	0.25	mg/L	1	09/18/03 14:13	JMR
Silver	0.0081 J	0.003	0.015	mg/L	1	09/18/03 14:13	JMR
Thallium	U	0.05	0.25	mg/L	1	09/18/03 14:13	JMR

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

* - Result is greater than the associated action level

6

Client: Thomas Matzen
North Wind Environmental, Inc.
545 Shoup Avenue
Idaho Falls, ID 83402
(208) 528-8718

Report Number: 0308156-2
Date Reported: 09/19/03
Work Order: 0308156
Lab Sample ID: 0308156-02A
Client Sample ID: S11-SP-03-CHR-B1-1
Date Collected: 08/19/03
Date Received: 08/20/03 13:30
Matrix: Soil
COC ID: 27344

Project: TEAD SWMU 11
Project ID:
Purchase Order:

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 1311: TCLP Extraction, Metals, Solid							
Prep Batch ID: 12053						09/02/03 15:20	DBW
Note for 09/02/03 15:20 analysis: 100% solids							
SW-846 1311: TCLP Extraction, Mercury, Solid							
Prep Batch ID: 12052						09/02/03 15:20	DBW
Note for 09/02/03 15:20 analysis: 100% solids							
SW-846 3010A: Flame/hrICP Prep, Extract							
Prep Batch ID: 12077						09/04/03 08:20	BBO
SW-846 7470A: Mercury by CVAA, TCLP, Extract							
Mercury	U	1	5	µg/L	1	09/04/03 15:00	LC
SW-846 7470A: Mercury Prep CVAA, Extract							
Prep Batch ID: 12073					10	09/03/03 15:30	TM
SW-846 6010B: Metals by hrICP (USACE), Extract							
Arsenic	0.060 J	0.03	0.15	mg/L	1	09/18/03 14:18	JMR
Barium	0.931	0.003	0.015	mg/L	1	09/18/03 14:18	JMR
Cadmium	0.0040 J	0.003	0.015	mg/L	1	09/18/03 14:18	JMR
Chromium	0.013 J	0.01	0.05	mg/L	1	09/18/03 14:18	JMR
Lead	0.036 J	0.03	0.15	mg/L	1	09/18/03 14:18	JMR
Nickel	0.025 J	0.02	0.1	mg/L	1	09/18/03 14:18	JMR
Selenium	U	0.05	0.25	mg/L	1	09/18/03 14:18	JMR
Silver	0.0091 J	0.003	0.015	mg/L	1	09/18/03 14:18	JMR
Thallium	U	0.05	0.25	mg/L	1	09/18/03 14:18	JMR

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

* - Result is greater than the associated action level

Client: Thomas Matzen
 North Wind Environmental, Inc.
 545 Shoup Avenue
 Idaho Falls, ID 83402
 (208) 528-8718

Report Number: 0308156-2
Date Reported: 09/19/03
Work Order: 0308156
Lab Sample ID: 0308156-03A
Client Sample ID: S11-LP-03-CHR-A1-1
Date Collected: 08/19/03
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Purchase Order:

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
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Note for 09/02/03 15:20 analysis: 100% solids							
SW-846 1311: TCLP Extraction, Mercury, Solid							
Prep Batch ID: 12052						09/02/03 15:20	DBW
Note for 09/02/03 15:20 analysis: 100% solids							
SW-846 3010A: Flame/hrICP Prep, Extract							
Prep Batch ID: 12077						09/04/03 08:20	BBO
SW-846 7470A: Mercury by CVAA, TCLP, Extract							
Mercury	U	1	5	µg/L	1	09/04/03 15:01	LC
SW-846 7470A: Mercury Prep CVAA, Extract							
Prep Batch ID: 12073					10	09/03/03 15:30	TM
SW-846 6010B: Metals by hrICP (USACE), Extract							
Arsenic	0.034 J	0.03	0.15	mg/L	1	09/18/03 14:23	JMR
Barium	0.810	0.003	0.015	mg/L	1	09/18/03 14:23	JMR
Cadmium	0.0378	0.003	0.015	mg/L	1	09/18/03 14:23	JMR
Chromium	0.016 J	0.01	0.05	mg/L	1	09/18/03 14:23	JMR
Lead	0.069 J	0.03	0.15	mg/L	1	09/18/03 14:23	JMR
Nickel	0.247	0.02	0.1	mg/L	1	09/18/03 14:23	JMR
Selenium	U	0.05	0.25	mg/L	1	09/18/03 14:23	JMR
Silver	0.0096 J	0.003	0.015	mg/L	1	09/18/03 14:23	JMR
Thallium	0.060 J	0.05	0.25	mg/L	1	09/18/03 14:23	JMR

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

* - Result is greater than the associated action level

Client: Thomas Matzen
North Wind Environmental, Inc.
545 Shoup Avenue
Idaho Falls, ID 83402
(208) 528-8718

Report Number: 0308156-2
Date Reported: 09/19/03
Work Order: 0308156
Lab Sample ID: 0308156-04A
Client Sample ID: S11-LP-03-CHR-B1-1
Date Collected: 08/19/03
Date Received: 08/20/03 13:30
Matrix: Soil
COC ID: 27344

Project: TEAD SWMU 11
Project ID:
Purchase Order:

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 1311: TCLP Extraction, Metals, Solid							
Prep Batch ID: 12053						09/02/03 15:20	DBW
Note for 09/02/03 15:20 analysis: 100% solids							
SW-846 1311: TCLP Extraction, Mercury, Solid							
Prep Batch ID: 12052						09/02/03 15:20	DBW
Note for 09/02/03 15:20 analysis: 100% solids							
SW-846 3010A: Flame/hrICP Prep, Extract							
Prep Batch ID: 12077						09/04/03 08:20	BBO
SW-846 7470A: Mercury by CVAA, TCLP, Extract							
Mercury	U	1	5	µg/L	1	09/04/03 15:03	LC
SW-846 7470A: Mercury Prep CVAA, Extract							
Prep Batch ID: 12073					10	09/03/03 15:30	TM
SW-846 6010B: Metals by hrICP (USACE), Extract							
Arsenic	U	0.03	0.15	mg/L	1	09/18/03 14:27	JMR
Barium	0.687	0.003	0.015	mg/L	1	09/18/03 14:27	JMR
Cadmium	0.0429	0.003	0.015	mg/L	1	09/18/03 14:27	JMR
Chromium	0.012 J	0.01	0.05	mg/L	1	09/18/03 14:27	JMR
Lead	0.552	0.03	0.15	mg/L	1	09/18/03 14:27	JMR
Nickel	0.110	0.02	0.1	mg/L	1	09/18/03 14:27	JMR
Selenium	0.066 J	0.05	0.25	mg/L	1	09/18/03 14:27	JMR
Silver	0.0074 J	0.003	0.015	mg/L	1	09/18/03 14:27	JMR
Thallium	U	0.05	0.25	mg/L	1	09/18/03 14:27	JMR

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

* - Result is greater than the associated action level

9

Client: Thomas Matzen
North Wind Environmental, Inc.
545 Shoup Avenue
Idaho Falls, ID 83402
(208) 528-8718

Report Number: 0308156-2
Date Reported: 09/19/03
Work Order: 0308156
Lab Sample ID: 0308156-05A
Client Sample ID: S11-WP1-03-CHR-A1-1
Date Collected: 08/20/03
Date Received: 08/20/03 13:30
Matrix: Soil
COC ID: 27344

Project: TEAD SWMU 11
Project ID:
Purchase Order:

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 1311: TCLP Extraction, Metals, Solid							
Prep Batch ID: 12053						09/02/03 15:20	DBW
Note for 09/02/03 15:20 analysis: 100% solids							
SW-846 1311: TCLP Extraction, Mercury, Solid							
Prep Batch ID: 12052						09/02/03 15:20	DBW
Note for 09/02/03 15:20 analysis: 100% solids							
SW-846 3010A: Flame/hrICP Prep, Extract							
Prep Batch ID: 12077						09/04/03 08:20	BBO
SW-846 7470A: Mercury by CVAA, TCLP, Extract							
Mercury	U	1	5	µg/L	1	09/04/03 15:04	LC
SW-846 7470A: Mercury Prep CVAA, Extract							
Prep Batch ID: 12073					10	09/03/03 15:30	TM
SW-846 6010B: Metals by hrICP (USACE), Extract							
Arsenic	0.037 J	0.03	0.15	mg/L	1	09/18/03 14:32	JMR
Barium	0.815	0.003	0.015	mg/L	1	09/18/03 14:32	JMR
Cadmium	0.0076 J	0.003	0.015	mg/L	1	09/18/03 14:32	JMR
Chromium	U	0.01	0.05	mg/L	1	09/18/03 14:32	JMR
Lead	0.070 J	0.03	0.15	mg/L	1	09/18/03 14:32	JMR
Nickel	0.032 J	0.02	0.1	mg/L	1	09/18/03 14:32	JMR
Selenium	0.058 J	0.05	0.25	mg/L	1	09/18/03 14:32	JMR
Silver	U	0.003	0.015	mg/L	1	09/18/03 14:32	JMR
Thallium	U	0.05	0.25	mg/L	1	09/18/03 14:32	JMR

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

* - Result is greater than the associated action level

10

Client: Thomas Matzen
North Wind Environmental, Inc.
545 Shoup Avenue
Idaho Falls, ID 83402
(208) 528-8718

Report Number: 0308156-2
Date Reported: 09/19/03
Work Order: 0308156
Lab Sample ID: 0308156-06A
Client Sample ID: S11-WP1-03-CHR-A2-1
Date Collected: 08/20/03
Date Received: 08/20/03 13:30
Matrix: Soil
COC ID: 27344

Project: TEAD SWMU 11
Project ID:
Purchase Order:

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 1311: TCLP Extraction, Metals, Solid							
Prep Batch ID: 12053						09/02/03 15:20	DBW
Note for 09/02/03 15:20 analysis: 100% solids							
SW-846 1311: TCLP Extraction, Mercury, Solid							
Prep Batch ID: 12052						09/02/03 15:20	DBW
Note for 09/02/03 15:20 analysis: 100% solids							
SW-846 3010A: Flame/hrICP Prep, Extract							
Prep Batch ID: 12077						09/04/03 08:20	BBO
SW-846 7470A: Mercury by CVAA, TCLP, Extract							
Mercury	U	1	5	µg/L	1	09/04/03 15:06	LC
SW-846 7470A: Mercury Prep CVAA, Extract							
Prep Batch ID: 12073					10	09/03/03 15:30	TM
SW-846 6010B: Metals by hrICP (USACE), Extract							
Arsenic	0.085 J	0.03	0.15	mg/L	1	09/18/03 14:36	JMR
Barium	0.675	0.003	0.015	mg/L	1	09/18/03 14:36	JMR
Cadmium	0.0066 J	0.003	0.015	mg/L	1	09/18/03 14:36	JMR
Chromium	U	0.01	0.05	mg/L	1	09/18/03 14:36	JMR
Lead	0.087 J	0.03	0.15	mg/L	1	09/18/03 14:36	JMR
Nickel	0.038 J	0.02	0.1	mg/L	1	09/18/03 14:36	JMR
Selenium	U	0.05	0.25	mg/L	1	09/18/03 14:36	JMR
Silver	0.0050 J	0.003	0.015	mg/L	1	09/18/03 14:36	JMR
Thallium	U	0.05	0.25	mg/L	1	09/18/03 14:36	JMR

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

* - Result is greater than the associated action level

11

Client: Thomas Matzen
North Wind Environmental, Inc.
545 Shoup Avenue
Idaho Falls, ID 83402
(208) 528-8718

Report Number: 0308156-2
Date Reported: 09/19/03
Work Order: 0308156
Lab Sample ID: 0308156-07A
Client Sample ID: S11-WP1-03 CHR-B1-1
Date Collected: 08/20/03
Date Received: 08/20/03 13:30
Matrix: Soil
COC ID: 27344

Project: TEAD SWMU 11
Project ID:
Purchase Order:

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 1311: TCLP Extraction, Metals, Solid							
Prep Batch ID: 12053						09/02/03 15:20	DBW
Note for 09/02/03 15:20 analysis: 100% solids							
SW-846 1311: TCLP Extraction, Mercury, Solid							
Prep Batch ID: 12052						09/02/03 15:20	DBW
Note for 09/02/03 15:20 analysis: 100% solids							
SW-846 3010A: Flame/hrICP Prep, Extract							
Prep Batch ID: 12077						09/04/03 08:20	BBO
SW-846 7470A: Mercury by CVAA, TCLP, Extract							
Mercury	U	1	5	µg/L	1	09/04/03 15:07	LC
SW-846 7470A: Mercury Prep CVAA, Extract							
Prep Batch ID: 12073					10	09/03/03 15:30	TM
SW-846 6010B: Metals by hrICP (USACE), Extract							
Arsenic	U	0.03	0.15	mg/L	1	09/18/03 14:41	JMR
Barium	0.866	0.003	0.015	mg/L	1	09/18/03 14:41	JMR
Cadmium	U	0.003	0.015	mg/L	1	09/18/03 14:41	JMR
Chromium	U	0.01	0.05	mg/L	1	09/18/03 14:41	JMR
Lead	0.032 J	0.03	0.15	mg/L	1	09/18/03 14:41	JMR
Nickel	U	0.02	0.1	mg/L	1	09/18/03 14:41	JMR
Selenium	0.057 J	0.05	0.25	mg/L	1	09/18/03 14:41	JMR
Silver	0.0097 J	0.003	0.015	mg/L	1	09/18/03 14:41	JMR
Thallium	U	0.05	0.25	mg/L	1	09/18/03 14:41	JMR

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

* - Result is greater than the associated action level

12

Client: Thomas Matzen
North Wind Environmental, Inc.
545 Shoup Avenue
Idaho Falls, ID 83402
(208) 528-8718

Report Number: 0308156-2
Date Reported: 09/19/03
Work Order: 0308156
Lab Sample ID: 0308156-08A
Client Sample ID: S11-WP2-03-CHR-A1-1
Date Collected: 08/19/03
Date Received: 08/20/03 13:30
Matrix: Soil
COC ID: 27344

Project: TEAD SWMU 11
Project ID:
Purchase Order:

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 1311: TCLP Extraction, Metals, Solid							
Prep Batch ID: 12053						09/02/03 15:20	DBW
Note for 09/02/03 15:20 analysis: 100% solids							
SW-846 1311: TCLP Extraction, Mercury, Solid							
Prep Batch ID: 12052						09/02/03 15:20	DBW
Note for 09/02/03 15:20 analysis: 100% solids							
SW-846 3010A: Flame/hrICP Prep, Extract							
Prep Batch ID: 12077						09/04/03 08:20	BBO
SW-846 7470A: Mercury by CVAA, TCLP, Extract							
Mercury	U	1	5	µg/L	1	09/04/03 15:09	LC
SW-846 7470A: Mercury Prep CVAA, Extract							
Prep Batch ID: 12073					10	09/03/03 15:30	TM
SW-846 6010B: Metals by hrICP (USACE), Extract							
Arsenic	0.036 J	0.03	0.15	mg/L	1	09/18/03 14:46	JMR
Barium	0.692	0.003	0.015	mg/L	1	09/18/03 14:46	JMR
Cadmium	0.0068 J	0.003	0.015	mg/L	1	09/18/03 14:46	JMR
Chromium	0.029 J	0.01	0.05	mg/L	1	09/18/03 14:46	JMR
Lead	0.036 J	0.03	0.15	mg/L	1	09/18/03 14:46	JMR
Nickel	0.024 J	0.02	0.1	mg/L	1	09/18/03 14:46	JMR
Selenium	U	0.05	0.25	mg/L	1	09/18/03 14:46	JMR
Silver	0.0078 J	0.003	0.015	mg/L	1	09/18/03 14:46	JMR
Thallium	U	0.05	0.25	mg/L	1	09/18/03 14:46	JMR

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

* - Result is greater than the associated action level

13

Client: Thomas Matzen
North Wind Environmental, Inc.
545 Shoup Avenue
Idaho Falls, ID 83402
(208) 528-8718

Report Number: 0308156-2
Date Reported: 09/19/03
Work Order: 0308156
Lab Sample ID: 0308156-09A
Client Sample ID: S11-WP2-03-CHR-A2-1
Date Collected: 08/19/03
Date Received: 08/20/03 13:30
Matrix: Soil
COC ID: 27344

Project: TEAD SWMU 11
Project ID:
Purchase Order:

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 1311: TCLP Extraction, Metals, Solid							
Prep Batch ID: 12053						09/02/03 15:20	DBW
Note for 09/02/03 15:20 analysis: 100% solids							
SW-846 1311: TCLP Extraction, Mercury, Solid							
Prep Batch ID: 12052						09/02/03 15:20	DBW
Note for 09/02/03 15:20 analysis: 100% solids							
SW-846 3010A: Flame/hrICP Prep, Extract							
Prep Batch ID: 12077						09/04/03 08:20	BBO
SW-846 7470A: Mercury by CVAA, TCLP, Extract							
Mercury	U	1	5	µg/L	1	09/04/03 15:10	LC
SW-846 7470A: Mercury Prep CVAA, Extract							
Prep Batch ID: 12073					10	09/03/03 15:30	TM
SW-846 6010B: Metals by hrICP (USACE), Extract							
Arsenic	0.064 J	0.03	0.15	mg/L	1	09/18/03 14:50	JMR
Barium	0.797	0.003	0.015	mg/L	1	09/18/03 14:50	JMR
Cadmium	0.0071 J	0.003	0.015	mg/L	1	09/18/03 14:50	JMR
Chromium	U	0.01	0.05	mg/L	1	09/18/03 14:50	JMR
Lead	0.065 J	0.03	0.15	mg/L	1	09/18/03 14:50	JMR
Nickel	0.033 J	0.02	0.1	mg/L	1	09/18/03 14:50	JMR
Selenium	U	0.05	0.25	mg/L	1	09/18/03 14:50	JMR
Silver	0.0081 J	0.003	0.015	mg/L	1	09/18/03 14:50	JMR
Thallium	U	0.05	0.25	mg/L	1	09/18/03 14:50	JMR

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

* - Result is greater than the associated action level

14

Client: Thomas Matzen
North Wind Environmental, Inc.
545 Shoup Avenue
Idaho Falls, ID 83402
(208) 528-8718

Report Number: 0308156-2
Date Reported: 09/19/03
Work Order: 0308156
Lab Sample ID: 0308156-10A
Client Sample ID: S11-WP2-03-CHR-B1-1
Date Collected: 08/19/03
Date Received: 08/20/03 13:30
Matrix: Soil
COC ID: 27344

Project: TEAD SWMU 11

Project ID:

Purchase Order:

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 1311: TCLP Extraction, Metals, Solid							
Prep Batch ID: 12053						09/02/03 15:20	DBW
Note for 09/02/03 15:20 analysis: 100% solids							
SW-846 1311: TCLP Extraction, Mercury, Solid							
Prep Batch ID: 12052						09/02/03 15:20	DBW
Note for 09/02/03 15:20 analysis: 100% solids							
SW-846 3010A: Flame/hrICP Prep, Extract							
Prep Batch ID: 12077						09/04/03 08:20	BBO
SW-846 7470A: Mercury by CVAA, TCLP, Extract							
Mercury	U	1	5	µg/L	1	09/04/03 15:15	LC
SW-846 7470A: Mercury Prep CVAA, Extract							
Prep Batch ID: 12073					10	09/03/03 15:30	TM
SW-846 6010B: Metals by hrICP (USACE), Extract							
Arsenic	U	0.03	0.15	mg/L	1	09/18/03 15:04	JMR
Barium	0.808	0.003	0.015	mg/L	1	09/18/03 15:04	JMR
Cadmium	U	0.003	0.015	mg/L	1	09/18/03 15:04	JMR
Chromium	U	0.01	0.05	mg/L	1	09/18/03 15:04	JMR
Lead	0.042 J	0.03	0.15	mg/L	1	09/18/03 15:04	JMR
Nickel	U	0.02	0.1	mg/L	1	09/18/03 15:04	JMR
Selenium	U	0.05	0.25	mg/L	1	09/18/03 15:04	JMR
Silver	0.0085 J	0.003	0.015	mg/L	1	09/18/03 15:04	JMR
Thallium	U	0.05	0.25	mg/L	1	09/18/03 15:04	JMR

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

* - Result is greater than the associated action level

15

Client: Thomas Matzen
North Wind Environmental, Inc.
545 Shoup Avenue
Idaho Falls, ID 83402
(208) 528-8718

Report Number: 0308156-2
Date Reported: 09/19/03
Work Order: 0308156
Lab Sample ID: 0308156-11A
Client Sample ID: S11-WP3-03-CHR-A1-1
Date Collected: 08/20/03
Date Received: 08/20/03 13:30
Matrix: Soil
COC ID: 27344

Project: TEAD SWMU 11
Project ID:
Purchase Order:

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 1311: TCLP Extraction, Metals, Solid							
Prep Batch ID: 12053						09/02/03 15:20	DBW
Note for 09/02/03 15:20 analysis: 100% solids							
SW-846 1311: TCLP Extraction, Mercury, Solid							
Prep Batch ID: 12052						09/02/03 15:20	DBW
Note for 09/02/03 15:20 analysis: 100% solids							
SW-846 3010A: Flame/hrICP Prep, Extract							
Prep Batch ID: 12077						09/04/03 08:20	BBO
SW-846 7470A: Mercury by CVAA, TCLP, Extract							
Mercury	U	1	5	µg/L	1	09/04/03 14:44	LC
SW-846 7470A: Mercury Prep CVAA, Extract							
Prep Batch ID: 12073					10	09/03/03 15:30	TM
SW-846 6010B: Metals by hrICP (USACE), Extract							
Arsenic	U	0.03	0.15	mg/L	1	09/18/03 13:32	JMR
Barium	0.705	0.003	0.015	mg/L	1	09/18/03 13:32	JMR
Cadmium	0.0043 J	0.003	0.015	mg/L	1	09/18/03 13:32	JMR
Chromium	U	0.01	0.05	mg/L	1	09/18/03 13:32	JMR
Lead	U	0.03	0.15	mg/L	1	09/18/03 13:32	JMR
Nickel	U	0.02	0.1	mg/L	1	09/18/03 13:32	JMR
Selenium	U	0.05	0.25	mg/L	1	09/18/03 13:32	JMR
Silver	0.0052 J	0.003	0.015	mg/L	1	09/18/03 13:32	JMR
Thallium	U	0.05	0.25	mg/L	1	09/18/03 13:32	JMR

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

* - Result is greater than the associated action level

16

Client: Thomas Matzen
 North Wind Environmental, Inc.
 545 Shoup Avenue
 Idaho Falls, ID 83402
 (208) 528-8718

Report Number: 0308156-2
Date Reported: 09/19/03
Work Order: 0308156
Lab Sample ID: 0308156-12A
Client Sample ID: S11-WP3-03-CHR-A2-1
Date Collected: 08/20/03
Date Received: 08/20/03 13:30
Matrix: Soil
COC ID: 27344

Project: TEAD SWMU 11
Project ID:
Purchase Order:

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 1311: TCLP Extraction, Metals, Solid							
Prep Batch ID: 12053						09/02/03 15:20	DBW
Note for 09/02/03 15:20 analysis: 100% solids							
SW-846 1311: TCLP Extraction, Mercury, Solid							
Prep Batch ID: 12052						09/02/03 15:20	DBW
Note for 09/02/03 15:20 analysis: 100% solids							
SW-846 3010A: Flame/hrICP Prep, Extract							
Prep Batch ID: 12077						09/04/03 08:20	BBO
SW-846 7470A: Mercury by CVAA, TCLP, Extract							
Mercury	U	1	5	µg/L	1	09/04/03 15:16	LC
SW-846 7470A: Mercury Prep CVAA, Extract							
Prep Batch ID: 12073					10	09/03/03 15:30	TM
SW-846 6010B: Metals by hrICP (USACE), Extract							
Arsenic	U	0.03	0.15	mg/L	1	09/18/03 15:09	JMR
Barium	0.722	0.003	0.015	mg/L	1	09/18/03 15:09	JMR
Cadmium	0.0036 J	0.003	0.015	mg/L	1	09/18/03 15:09	JMR
Chromium	U	0.01	0.05	mg/L	1	09/18/03 15:09	JMR
Lead	U	0.03	0.15	mg/L	1	09/18/03 15:09	JMR
Nickel	U	0.02	0.1	mg/L	1	09/18/03 15:09	JMR
Selenium	U	0.05	0.25	mg/L	1	09/18/03 15:09	JMR
Silver	0.0079 J	0.003	0.015	mg/L	1	09/18/03 15:09	JMR
Thallium	U	0.05	0.25	mg/L	1	09/18/03 15:09	JMR

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

* - Result is greater than the associated action level

17

Client: Thomas Matzen
North Wind Environmental, Inc.
545 Shoup Avenue
Idaho Falls, ID 83402
(208) 528-8718

Report Number: 0308156-2
Date Reported: 09/19/03
Work Order: 0308156
Lab Sample ID: 0308156-13A
Client Sample ID: S11-WP3-03-CHR-B1-1
Date Collected: 08/20/03
Date Received: 08/20/03 13:30
Matrix: Soil
COC ID: 27344

Project: TEAD SWMU 11
Project ID:
Purchase Order:

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 1311: TCLP Extraction, Metals, Solid							
Prep Batch ID: 12053						09/02/03 15:20	DBW
Note for 09/02/03 15:20 analysis: 100% solids							
SW-846 1311: TCLP Extraction, Mercury, Solid							
Prep Batch ID: 12052						09/02/03 15:20	DBW
Note for 09/02/03 15:20 analysis: 100% solids							
SW-846 3010A: Flame/hrICP Prep, Extract							
Prep Batch ID: 12077						09/04/03 08:20	BBO
SW-846 7470A: Mercury by CVAA, TCLP, Extract							
Mercury	U	1	5	µg/L	1	09/04/03 15:18	LC
SW-846 7470A: Mercury Prep CVAA, Extract							
Prep Batch ID: 12073					10	09/03/03 15:30	TM
SW-846 6010B: Metals by hrICP (USACE), Extract							
Arsenic	U	0.03	0.15	mg/L	1	09/18/03 15:14	JMR
Barium	0.924	0.003	0.015	mg/L	1	09/18/03 15:14	JMR
Cadmium	U	0.003	0.015	mg/L	1	09/18/03 15:14	JMR
Chromium	U	0.01	0.05	mg/L	1	09/18/03 15:14	JMR
Lead	0.067 J	0.03	0.15	mg/L	1	09/18/03 15:14	JMR
Nickel	0.024 J	0.02	0.1	mg/L	1	09/18/03 15:14	JMR
Selenium	U	0.05	0.25	mg/L	1	09/18/03 15:14	JMR
Silver	0.0090 J	0.003	0.015	mg/L	1	09/18/03 15:14	JMR
Thallium	0.059 J	0.05	0.25	mg/L	1	09/18/03 15:14	JMR

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

* - Result is greater than the associated action level

18



Quality Control Summary

Client: North Wind Environmental, Inc.
Project: TEAD SWMU 11
Project ID:

Report Number: 0308156-2
Date Reported: 09/19/03
Work Order: 0308156

SW-846 6010B: Metals by hrICP (USACE), Extract

QC Type: Method Blank
Sample ID: PBW-12077
Run ID: TJA-IRIS_030918A

Analysis Date: 09/18/03 13:24
Prep Batch ID: 12077

Units: mg/L
Seq No: 479608

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD RPD Limit
Arsenic	0.018	0	0	0	-0.06	0.03		
Barium	0.00032	0	0	0	-0.006	0.003		
Cadmium	0.000080	0	0	0	-0.008	0.004		
Chromium	0.00012	0	0	0	-0.02	0.01		
Lead	0.0035	0	0	0	-0.06	0.03		
Nickel	0.00020	0	0	0	-0.02	0.02		
Selenium	0.028	0	0	0	-0.2	0.1		
Silver	0.000050	0	0	0	-0.02	0.01		
Thallium	-0.025	0	0	0	-0.04	0.04		

QC Type: Laboratory Control Sample (Water)
Sample ID: LCSW-12077
Run ID: TJA-IRIS_030918A

Analysis Date: 09/18/03 13:28
Prep Batch ID: 12077

Units: mg/L
Seq No: 479610

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD RPD Limit
Arsenic	0.984		1.00	98.4	80	120		
Barium	0.191		0.200	95.6	80	120		
Cadmium	0.101		0.100	101	80	120		
Chromium	0.410		0.400	103	80	120		
Lead	0.963		1.00	96.3	80	120		
Nickel	0.418		0.400	104	80	120		
Selenium	0.984		1.00	98.4	80	120		
Silver	0.0986		0.100	98.6	80	120		
Thallium	0.867		1.00	86.7	80	120		

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

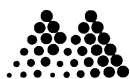
S -Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

NC - Not Calculated: Duplicate value(s) are less than the MDL



Quality Control Summary

Client: North Wind Environmental, Inc.
Project: TEAD SWMU 11
Project ID:

Report Number: 0308156-2
Date Reported: 09/19/03
Work Order: 0308156

QC Type: Sample Duplicate
Sample ID: 0308156-11A D
Run ID: TJA-IRIS_030918A

Analysis Date: 09/18/03 13:36
Prep Batch ID: 12077

Units: mg/L
Seq No: 479612

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD Limit
Arsenic	U						U	NC
Barium	0.711						0.705	0.76
Cadmium	0.0043 J						0.0043 J	0.23
Chromium	U						U	NC
Lead	U						U	NC
Nickel	U						U	NC
Selenium	U						U	NC
Silver	0.0048 J						0.0052 J	7.0
Thallium	U						U	NC

QC Type: Matrix Spike
Sample ID: 0308156-11A MS
Run ID: TJA-IRIS_030918A

Analysis Date: 09/18/03 13:40
Prep Batch ID: 12077

Units: mg/L
Seq No: 479613

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD Limit
Arsenic	1.09	U	1.00	109	80	120		
Barium	0.937	0.705	0.200	116	80	120		
Cadmium	0.0964	0.0043 J	0.100	92.0	80	120		
Chromium	0.383	U	0.400	95.7	80	120		
Lead	0.984	U	1.00	98.4	80	120		
Nickel	0.421	U	0.400	105	80	120		
Selenium	1.09	U	1.00	109	80	120		
Silver	0.106	0.0052 J	0.100	101	80	120		
Thallium	0.987	U	1.00	98.7	80	120		

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

NC - Not Calculated: Duplicate value(s) are less than the MDL



Quality Control Summary

Client: North Wind Environmental, Inc.
Project: TEAD SWMU 11
Project ID:

Report Number: 0308156-2
Date Reported: 09/19/03
Work Order: 0308156

QC Type: Matrix Spike Duplicate
Sample ID: 0308156-11A MSD
Run ID: TJA-IRIS_030918A

Analysis Date: 09/18/03 13:43
Prep Batch ID: 12077

Units: mg/L
Seq No: 479614

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Arsenic	1.11	U	1.00	111	80	120	1.09	2.0	20
Barium	0.916	0.705	0.200	106	80	120	0.937	2.2	20
Cadmium	0.0999	0.0043 J	0.100	95.6	80	120	0.0964	3.6	20
Chromium	0.389	U	0.400	97.2	80	120	0.383	1.6	20
Lead	1.02	U	1.00	102	80	120	0.984	3.2	20
Nickel	0.414	U	0.400	103	80	120	0.421	1.7	20
Selenium	1.08	U	1.00	108	80	120	1.09	1.0	20
Silver	0.106	0.0052 J	0.100	101	80	120	0.106	0.42	20
Thallium	0.962	U	1.00	96.2	80	120	0.987	2.6	20

QC Type: Pre-Preservation Spike
Sample ID: 0308156-11A S
Run ID: TJA-IRIS_030918A

Analysis Date: 09/18/03 13:48
Prep Batch ID: 12077

Units: mg/L
Seq No: 479615

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Arsenic	5.43	U	5.00	109	50				
Barium	9.69	0.705	10.0	89.9	50				
Cadmium	0.102	0.0043 J	0.100	97.4	50				
Chromium	0.497	U	0.500	99.3	50				
Lead	0.499	U	0.500	99.8	50				
Nickel	4.81	U	5.00	96.1	50				
Selenium	5.04	U	5.00	101	50				
Silver	0.102	0.0052 J	0.100	97.2	50				
Thallium	0.20J	U	0.20	100	50				

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

NC - Not Calculated: Duplicate value(s) are less than the MDL



Quality Control Summary

Client: North Wind Environmental, Inc.
Project: TEAD SWMU 11
Project ID:

Report Number: 0308156-2
Date Reported: 09/19/03
Work Order: 0308156

QC Type: Post Digestion/Distillation Spike
Sample ID: 0308156-11A A
Run ID: TJA-IRIS_030918A

Analysis Date: 09/18/03 13:54
Prep Batch ID: 12077

Units: mg/L
Seq No: 479616

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD Limit
Arsenic	1.15	U	1.00	115	75	125		
Barium	0.893	0.705	0.200	93.7	75	125		
Cadmium	0.106	0.0043 J	0.100	102	75	125		
Chromium	0.415	U	0.400	104	75	125		
Lead	1.01	U	1.00	101	75	125		
Nickel	0.431	U	0.400	108	75	125		
Selenium	1.10	U	1.00	110	75	125		
Silver	0.113	0.0052 J	0.100	108	75	125		
Thallium	0.971	U	1.00	97.1	75	125		

QC Type: Serial Dilution
Sample ID: 0308156-11A L
Run ID: TJA-IRIS_030918A

Analysis Date: 09/18/03 13:59
Prep Batch ID: 12077

Units: mg/L
Seq No: 479617

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	%D	%D Limit
Arsenic	U						U	NC	10
Barium	0.700						0.705	0.76	10
Cadmium	U						0.0043 J	NC	10
Chromium	U						U	NC	10
Lead	U						U	NC	10
Nickel	U						U	NC	10
Selenium	U						U	NC	10
Silver	U						0.0052 J	NC	10
Thallium	U						U	NC	10

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

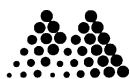
S -Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

NC - Not Calculated: Duplicate value(s) are less than the MDL



Quality Control Summary

Client: North Wind Environmental, Inc.

Project: TEAD SWMU 11

Project ID:

Report Number: 0308156-2

Date Reported: 09/19/03

Work Order: 0308156

QC Type: TCLP Blank

Sample ID: TBLK-12052

Run ID: TJA-IRIS_030918A

Analysis Date: 09/18/03 15:19

Prep Batch ID: 12077

Units: mg/L

Seq No: 479647

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD RPD Limit
Arsenic	-0.028	0	0	0	-0.06	0.25		
Barium	0.128	0	0	0	-0.006	1.05		
Cadmium	0.00032	0	0	0	-0.006	0.0055		
Chromium	0.0027	0	0	0	-0.02	0.03		
Lead	0.068JS(5b)	0	0	0	-0.06	0.0375		
Nickel	0.0017	0	0	0	-0.02	0.55		
Selenium	0.054JS(5b)	0	0	0	-0.08	0.05		
Silver	-0.0026	0	0	0	-0.006	0.01		
Thallium	0.020	0	0	0	-0.08	0.04		

5b: Extract blank indicates a high bias - no sample data significantly impacted

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

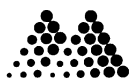
S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

NC - Not Calculated: Duplicate value(s) are less than the MDL

**Quality Control Summary**

Client: North Wind Environmental, Inc.
Project: TEAD SWMU 11
Project ID:

Report Number: 0308156-2
Date Reported: 09/19/03
Work Order: 0308156

SW-846 7470A: Mercury by CVAA, TCLP, Extract

QC Type: Method Blank
Sample ID: PBW-12073
Run ID: FIMS_030904A

Analysis Date: 09/04/03 14:41
Prep Batch ID: 12073

Units: µg/L
Seq No: 474846

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD RPD Limit
Mercury	-0.054	0	0	0	-0.2	0.1		

QC Type: Laboratory Control Sample (Water)
Sample ID: LCSW-12073
Run ID: FIMS_030904A

Analysis Date: 09/04/03 14:43
Prep Batch ID: 12073

Units: µg/L
Seq No: 474847

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD RPD Limit
Mercury	5.09		5.00	102	80	120		

QC Type: Sample Duplicate
Sample ID: 0308156-11A D
Run ID: FIMS_030904A

Analysis Date: 09/04/03 14:46
Prep Batch ID: 12073

Units: µg/L
Seq No: 474849

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD RPD Limit
Mercury	U						U	NC 20

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

NC - Not Calculated: Duplicate value(s) are less than the MDL



Quality Control Summary

Client: North Wind Environmental, Inc.
Project: TEAD SWMU 11
Project ID:

Report Number: 0308156-2
Date Reported: 09/19/03
Work Order: 0308156

QC Type: Matrix Spike
Sample ID: 0308156-11A MS
Run ID: FIMS_030904A

Analysis Date: 09/04/03 14:47
Prep Batch ID: 12073

Units: µg/L
Seq No: 474850

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD Limit
Mercury	46.1	U	50.0	92.1	80	120		

QC Type: Matrix Spike Duplicate
Sample ID: 0308156-11A MSD
Run ID: FIMS_030904A

Analysis Date: 09/04/03 14:49
Prep Batch ID: 12073

Units: µg/L
Seq No: 474851

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD Limit
Mercury	48.8	U	50.0	97.7	80	120	46.1	5.8

QC Type: Pre-Preservation Spike
Sample ID: 0308156-11A S
Run ID: FIMS_030904A

Analysis Date: 09/04/03 14:50
Prep Batch ID: 12073

Units: µg/L
Seq No: 474852

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD Limit
Mercury	20.4	U	25.0	81.5	50			

QC Type: Serial Dilution
Sample ID: 0308156-11A L
Run ID: FIMS_030904A

Analysis Date: 09/04/03 14:53
Prep Batch ID: 12073

Units: µg/L
Seq No: 474853

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	%D Limit
Mercury	U						U	NC

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

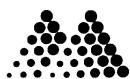
S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

NC - Not Calculated: Duplicate value(s) are less than the MDL



Quality Control Summary

Client: North Wind Environmental, Inc.
Project: TEAD SWMU 11
Project ID:

Report Number: 0308156-2
Date Reported: 09/19/03
Work Order: 0308156

QC Type: TCLP Blank
Sample ID: TBLK-12052
Run ID: FIMS_030904A

Analysis Date: 09/04/03 15:21
Prep Batch ID: 12073

Units: µg/L
Seq No: 474871

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD Limit
Mercury	-0.13	0	0	0	-0.2	1.25		

QC Type: Post Digestion/Distillation Spike
Sample ID: 0308156-11A A
Run ID: FIMS_030904A

Analysis Date: 09/04/03 15:44
Prep Batch ID: 12073

Units: µg/L
Seq No: 474874

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD Limit
Mercury	49.8	U	50.0	99.6	85	115		

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

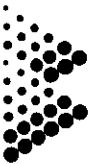
S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

NC - Not Calculated: Duplicate value(s) are less than the MDL



Mountain States Analytical, Inc.

1645 West 2200 South • Salt Lake City, UT 84119 • 800-973-6724 • Fax 801-972-6278
Website: www.msalabs.com E-mail: service@msalabs.com

Sample Chain of Custody
Analysis Request Form

27344

Company/Client: North Wind		Sampler(s): Matzen / Armstrong	
Project Name: Summa 11		Quote #: SCA-02	
Project No.:		P.O.#:	
Sample Identification			
Sample Identification	Date Collected	Time Collected	Grab
1 S11-SP-03-CHL-A1-1	8/19/03	1545	X
2 S11-SP-03-CHL-B1-1	8/19/03	1550	X
3 S11-LP-03-CHL-A1-1	8/19/03	1500	X
4 S11-LP-03-CHL-B1-1	8/19/03	1510	X
5 S11-WP1-03-CHL-A1-1	8/20/03	0750	X
6 S11-WP1-03-CHL-A2-1	8/20/03	0800	X
7 S11-WP1-03-CHL-B1-1	8/20/03	0810	X
8 S11-WP2-03-CHL-A1-1	8/19/03	1735	X
9 S11-WP2-03-CHL-A2-1	8/19/03	1740	X
10 S11-WP2-03-CHL-B1-1	8/19/03	1755	X
11 S11-WP3-03-CHL-A1-1	8/20/03	0835	X
12 S11-WP3-03-CHL-A2-1	8/20/03	0845	X
13 S11-WP3-03-CHL-B1-1	8/20/03	0855	X
Relinquished By Date Time Received By			
1 <i>Quincy</i> 8/20/03 1330 <i>John O'Leary</i>			
2			
3			
Contact Information			
Reports To: T. Matzen		Turnaround Time:	
E-mail: tmatzen@windward.com		Standard Rush* Days(s)	
Phone: 208-528-8718		RUSH TAX is subject to MSAL approval and surcharges will apply. ALL TAX's are based on WORKING days. Samples received after 4:00 PM will not be processed until the next business day.	
Fax: 208-528-8714		Preservative:	
Address: 545 Shoup Ave		1 - Chilled to 4°C	
Idaho Falls 83402		2 - HNO ₃	
		3 - H ₂ SO ₄	
		4 - Na ₂ S ₂ O ₈	
		5 - HCl	
		6 - NaOH	
		7 - NaOH/ZnAC	
		8 - Other	
Comments/Special Instructions:			
MSAL Use			
W.O. # 038150			
LOC 13A2			
13A3			

Mountain States Analytical, LLC

Sample Receipt Checklist

Client Name: North Wind
Carrier: Client

Work Order No. 0308156
Carrier Number: _____

☐ Hand delivered, no cooler ☐ Hand delivered, sample(s) taken out at receiving counter

Cooler Information: Non-Rad ☒ Exempt ☐ White I ☐ Yellow II ☐ Yellow III ☐ ALARA: α _____ / β _____
Ludlum Model 3 Serial # _____ Ludlum Model 2929 Scaler Serial # _____
Smear Results: **Cooler:** α _____ / β _____ **Inner Pkg:** α _____ / β _____ **Samples:** α _____ / β _____
Transport Index (1 meter reading for Yellow II & III only) _____ mR/hr

Cooler Number/ID: 403 Surface Radioactivity Reading (if required) _____ mR/hr
Condition of Shipping Container: Good ☒ Fair ☐ Damaged (explain) _____
Cooler Sealed (taped): Yes ☐ No ☒ Not Applicable ☐ PID Reading 0.0 ppm N/A-- ☐ Hand Delivered
☐ Charging Battery
☐ Out of Service

Custody Seals Present: Yes ☐ No ☒ Not Applicable ☐
Intact ☐ Broken ☐ Seal Number: _____

Coolant: Ice ☒ Blue Ice ☐ None ☐ Other: _____
State of Coolant: Frozen ☒ Partially Frozen ☐ Melted ☐
Thermometer ID: 3801 Reading: 1.5 °C CF: 0 Corrected Temp: _____ °C Temp Blank Included: Yes ☒ No ☐

Packing Description: sample containers wrapped in bubble wrap inside a cooler

Chain-Of-Custody Information:

COC Present: Yes ☒ No ☐ Other: _____
COC Number(s): 27344
COC signed (relinquished and received): Yes ☒ No ☐ Not Applicable ☐
COC agrees with sample labels: Yes ☒ No ☐ Not Applicable ☐
Notes: _____

Sample Information:

Samples included in cooler: S11-SP-03-CHR-A1-1 S11-WP1-03-CHR-A2-1 S11-WP3-03-CHR-A1-1
S11-SP-03-CHR-B1-1 S11-WP1-03-CHR-B1-1 S11-WP3-03-CHR-A2-1
S11-LP-03-CHR-A1-1 S11-WP2-03-CHR-A1-1 S11-WP3-03-CHR-B1-1
S11-LP-03-CHR-B1-1 S11-WP2-03-CHR-A2-1
S11-WP1-03-CHR-A2-1 S11-WP2-03-CHR-B1-1

Custody Seals Present: Yes ☒ No ☐ Not Applicable ☐ Other _____
Intact ☒ Broken ☐ Seal Number(s) _____

Sample containers intact: Yes ☒ No ☐ Notes: _____
Samples in proper containers: Yes ☒ No ☐
Sufficient sample volume: Yes ☒ No ☐
All samples received in hold time: Yes ☒ No ☐

Water - VOA's have zero headspace: Yes ☐ No ☐ Not Applicable ☒
Pre-preserved with HCl: ☐ Pre-preserved with Na2S2O3: ☐ Non-Preserved: ☐

Notes: _____

Water - pH acceptable upon receipt: Yes ☐ Adjusted (see comments below) ☐ Not Applicable ☒
HNO₃ = _____ H₂SO₄ = _____ NaOH = _____ ZnAC / NaOH = _____ HCL = _____

Water - pH adjusted: (MSA Tracking No.)
HNO₃ _____ H₂SO₄ _____ NaOH _____
ZnAC _____ Na₂S₂O₃ _____ Other _____

Notes: _____

Cooler Contents Inspected & Verified By:

Joselyn Hurdley Date: 8.20.03 Time: 1402 Reviewed by: _____ Date: _____



CH 217789B

FOR INTERNAL USE ONLY:

- ☐ Normal Profile ☐ X-Profile
☐ One Time Waste ☐ Repeat Waste

For X-Profile only to 617,380,3581

Waste Material Profile Sheet

Profile Number **CH 217789B**

A. GENERAL INFORMATIONGENERATOR EPA ID # UT3213820894

GENERATOR CODE (Assigned by Clean Harbors) _____

GENERATOR NAME: Tooele Army DepotADDRESS: SJMTE-CS-EO Building 8CITY TooeleSTATE UT ZIP 84074GENERATOR TECHNICAL CONTACT: Larry McFarlandPHONE: (435) 833-3504

CUSTOMER CODE (Assigned by Clean Harbors) _____

CUSTOMER NAME: North Wind Inc. attn: Aran ArmstrongADDRESS: 545 Shoup AveCITY Idaho FallsSTATE ID ZIP 83402**B. WASTE DESCRIPTION**Common Name of Waste: SoilProcess Generating Waste: Remediation of SWMU 11 Laundry/Sewage Ponds and Waste Pile Areas**Process Generating Waste:**

(check one) If spill, origin of spilled material

- ☐ Unused chemical or product
☐ Lab Pack
☐ Spent halogenated solvents
☐ Spent non-halogenated solvents
☐ Wastewater treatment sludge from electroplating or etching operations
☐ Spent plating bath solutions or residues of plating, stripping and cleaning baths where cyanides are used in the process
☐ Wood preservation
☐ Inorganic pigment production
☐ Organic chemical production
☐ Inorganic chemical production
☐ Pesticide production
☐ Explosives production
☐ Petroleum refining
☐ Iron or steel production or finishing
☐ Primary copper production
☐ Primary lead production
☐ Primary zinc production
☐ Primary Aluminum production
☐ Ferro alloy production
☐ Secondary lead smelting
☐ Veterinary pharmaceutical production
☐ Ink formulation
☐ Coking
☒ Other Remediation of laundry/sewage ponds and waste piles
☐ Unknown

Source of Waste:

(check one)

- ☐ Unused Product or Chemical
☐ Waste by-product from process
☐ Spill clean up
☐ Lab Pack
☒ Planned site remediation
☐ Other: _____

Other Process Information:

(check all that apply)

- ☐ Still bottoms
☐ Process Scrap
☐ Process development
☐ Out of date product
☐ Spent solvent waste
☐ Treatment residues
☐ Filter cake
☐ Degreasing
☐ Exempt recyclable material
☐ Packaged consumer goods
☐ Off-spec chemical product
☐ Zinc, Al, or tin plating
☐ Anodizing
☐ Cleaning/stripping
☐ Wastewater treatment sludges
☐ Pot liners
☐ Washwaters

Other Process Information:

(check all that apply)

- ☐ Electroplating
☐ Conversion coating
☐ Carbon steel plating
☐ Printed circuit mfg.
☐ Cyanide process
☐ Heat treating
☐ Separator sludge
☐ Oven residue
☐ Catalyst waste
☐ Centrifuged solids
☐ Condensate
☐ Air, steam or vacuum stripping
☐ Emission control dust
☐ Acid leaching
☐ Dipping operations
☐ Chemical manufacturing
☐ Carbon Adsorption
☐ Incineration or thermal treatment
☐ Refining
☐ Drug mfg.
☐ Distillation
☐ Pesticide mfg.
☐ Reclamation
☐ Etching of metals
☐ Bag house dust

C. PHYSICAL PROPERTIES (at 25°C or 77°F)

PHYSICAL STATE		NUMBER OF PHASES/LAYERS		VISCOSITY (if liquid present)		COLOR	
<input checked="" type="checkbox"/> Solid without free liquid <input type="checkbox"/> Powder <input type="checkbox"/> Monolithic Solid <input type="checkbox"/> Liquids with no solids <input type="checkbox"/> Liquid/solid Mixture % free liquid _____ % settled solid _____ % total suspended solid _____ Gas/Aerosol _____		<input checked="" type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 % by volume (approx.) Top _____ Middle _____ Bottom _____		<input type="checkbox"/> Low (e.g. Water) <input type="checkbox"/> Medium (e.g. motor oil) <input type="checkbox"/> High (e.g. molasses)		brown	
		ODOR <input checked="" type="checkbox"/> None or mild <input type="checkbox"/> Strong		BOILING POINT (if liquid) <input type="checkbox"/> ≤ 100° F <input type="checkbox"/> > 100° F		MELTING POINT (for solids only) <input type="checkbox"/> < 140° F <input type="checkbox"/> 140 to 200° F <input checked="" type="checkbox"/> > 200° F	
FLASH POINT <input type="checkbox"/> < 73° F <input type="checkbox"/> 73 - 100° F <input type="checkbox"/> 101 - 140° F <input type="checkbox"/> 141 - 200° F <input checked="" type="checkbox"/> > 200° F		pH <input type="checkbox"/> ≤ 2 <input type="checkbox"/> 2.1 - 6.9 <input type="checkbox"/> 7 (neutral) <input checked="" type="checkbox"/> 7.1 - 12.4 <input type="checkbox"/> ≥ 12.5		SPECIFIC GRAVITY <input type="checkbox"/> < 0.8 (e.g. Gasoline) <input type="checkbox"/> 0.8 - 1.0 (e.g. Ethanol) <input type="checkbox"/> 1.0 (e.g. Water) <input type="checkbox"/> 1.0-1.2 (e.g. Antifreeze) <input checked="" type="checkbox"/> > 1.2 (e.g. Methylene Chloride)		TOTAL ORGANIC CARBON (if liquid) <input type="checkbox"/> ≤ 1% <input type="checkbox"/> 1-9 % <input type="checkbox"/> ≥ 10%	
						BTU/LB <input type="checkbox"/> < 2000 <input type="checkbox"/> 2,000 - 5,000 <input type="checkbox"/> 5,000 - 10,000 <input type="checkbox"/> > 10,000	
VAPOR PRESSURE (for liquids only) _____ mm/Hg							



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D. COMPOSITION (Must add up to at least 100%. Include inert materials and/or debris if applicable. Actual percent or range is acceptable.)

soil 98 to 100 wt % _____ %

rocks, vegetation, plastic sheeting, used PPE 0 to 1 wt % _____ %

small pieces of scrap metal, wood, glass 0 to 1 wt % _____ %

_____ % _____ %

_____ % _____ %

☐ Check if MSDS attached.

E. Constituents — Attach any available analysis. Enter values or ranges where known. For TCLP values, BRL signifies below regulatory level. None, unknown, and present are also acceptable answers.

 Are these values based on ☐ Knowledge or ☒ Testing?

INORGANIC

RCRA	REGULATED METALS	REGULATORY LEVEL (mg/l)	TCLP mg/l	TOTAL mg/l	OTHER METALS	TOTAL	NON-METALS	WT%
D004	ARSENIC	5.0	0.085		ALUMINUM	Unknown	SULFUR	None
D005	BARIUM	100.0	0.931		ANTIMONY		BROMINE	
D006	CADMIUM	1.0	0.0429		BERYLLIUM		CHLORINE	
D007	CHROMIUM	5.0	0.029		CALCIUM		FLUORINE	
D007	CHROMIUM CR+6				COPPER		IODINE	
D008	LEAD	5.0	0.552		MAGNESIUM			
D009	MERCURY	0.2	ND		MOLYBDENUM			
D010	SELENIUM	1.0	0.086		NICKEL		AMMONIA	PPM
D011	SILVER	5.0	0.0097		POTASSIUM		REACTIVE SULFIDE	None
					SILICON		CYANIDE-TOTAL	
					SODIUM		CYANIDE-AMENABLE	
					THALLIUM		CYANIDE REACTIVE	
					TIN			
					VANADIUM			
					ZINC			

ORGANIC

VOLATILE COMPOUNDS				SEMI-VOLATILE COMPOUNDS			
	REGULATORY LEVEL (mg/l)	TCLP mg/l	TOTAL mg/l		REGULATORY LEVEL (mg/l)	TCLP	TOTAL
D018	BENZENE	0.5	None	D023	o-CRESOL	200.0	None
D019	CARBON TETRACHLORIDE	0.5		D024	m-CRESOL	200.0	
D021	CHLOROBENZENE	100.0		D025	p-CRESOL	200.0	
D022	CHLOROFORM	6.0		D026	CRESOL(TOTAL)	200.0	
D028	1,2-DICHLOROETHANE	0.5		D027	1,4-DICHLOROBENZENE	7.5	
D029	1,1-DICHLOROETHYLENE	0.7		D030	2,4-DINITROTOLUENE	0.13	
D035	METHYLETHYL KETONE	200.0		D032	HEXACHLOROBENZENE	0.13	
D039	TETRACHLOROETHYLENE	0.7		D033	HEXACHLOROBUTADIENE	0.5	
D040	TRICHLOROETHYLENE	0.5		D034	HEXACHLOROETHANE	3.0	
D043	VINYL CHLORIDE	0.2		D036	NITROBENZENE	2.0	
				D037	PENTACHLOROPHENOL	100.0	
				D038	PYRIDINE	5.0	
				D041	2,4,5-TRICHLOROPHENOL	400.0	
				D042	2,4,6-TRICHLOROPHENOL	2.0	

PESTICIDES AND HERBICIDES			
	REGULATORY LEVEL (mg/l)	TCLP mg/l	TOTAL mg/l
D012	ENDRIN	0.02	None
D013	LINDANE	0.4	
D014	METHOXYCHLOR	10.0	
D015	TOXAPHENE	0.5	
D016	2,4-D	10.0	
D017	2,4,5-TP (SILVEX)	1.0	
D020	CHLORODANE	0.03	
D031	HEPTACHLOR (AND ITS EPOXIDE)	0.008	

OTHER

PHENOL _____ None _____ PPM

TOTAL PETROLEUM HYDROCARBONS (solids only) _____ Unknown PPM

PCB'S

☒ NONE

☐ < 50PPM

☐ > 50PPM

HOC'S

☐ NONE

☐ < 1000 PPM

☐ > 1000 PPM

IF PCB'S ARE PRESENT

< 50 PPM, IS THE WASTE

REGULATED BY TSCA

40 CFR 761?

☐ YES ☐ NO

OTHER HAZARDS

YES	YES	YES	YES
WATER REACTIVE <input type="checkbox"/>	PESTICIDE <input type="checkbox"/>	SHOCK SENSITIVE <input type="checkbox"/>	DEA REGULATED SUBSTANCE <input type="checkbox"/>
RADIOACTIVE <input type="checkbox"/>	HERBICIDE <input type="checkbox"/>	THERMALLY SENSITIVE <input type="checkbox"/>	OXIDIZER <input type="checkbox"/>
DIOXIN <input type="checkbox"/>	EXPLOSIVE <input type="checkbox"/>	INFECTIOUS, PATHOGENIC, OR ETIOLOGICAL AGENT <input type="checkbox"/>	REDUCING AGENT <input type="checkbox"/>
OSHA REGULATED <input type="checkbox"/>	SPONTANEOUSLY <input type="checkbox"/>	ASBESTOS <input type="checkbox"/>	NONE OF THE ABOVE <input checked="" type="checkbox"/>
CARCINOGENS <input type="checkbox"/>	IGNITES WITH AIR <input type="checkbox"/>		

DOES THIS WASTE HAVE ANY UNDISCLOSED HAZARDS OR PRIOR INCIDENTS ASSOCIATED WITH IT, WHICH COULD AFFECT THE WAY IT SHOULD BE HANDLED?

YES ☐ NO ☒ (If yes, explain)



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F. REGULATORY STATUS

Y N

- ☐ ☒ USEPA HAZARDOUS WASTE? (if Yes, list codes.) None
- ☐ ☒ DO ANY GENERATOR STATE WASTE CODES APPLY? If YES, list state codes. None
- LIST ANY FEDERAL OR STATE WASTE CODES WHICH MAY VARY FROM SHIPMENT TO SHIPMENT: None

WILL THE DECISION TO VARY THESE WASTE CODES BE BASED ON ☐ KNOWLEDGE OR ☐ TESTING (check one).
 IF KNOWLEDGE, DESCRIBE BASIS OF KNOWLEDGE: _____

- ☐ ☒ IS THIS WASTE PROHIBITED FROM LAND DISPOSAL WITHOUT FURTHER TREATMENT PER 40 CFR PART 267?
 THIS WASTE IS A: ☐ WASTEWATER ☒ NON WASTEWATER PER USEPA DEFINITION IN 40 CFR 268.27
- ☐ ☒ IF ANY WASTE CODES D001, D002, D003 (OTHER THAN REACTIVE CYANIDE OR REACTIVE SULFIDE), D004-D011, D012-D017 NON WASTEWATERS, OR OR D018-D043 APPLY, ARE THERE ANY UNDERLYING HAZARDOUS CONSTITUENTS (UHS'C) PRESENT ABOVE UNIVERSAL TREATMENT STANDARDS (UTS)?
- ☐ ☒ DOES TREATMENT OF THIS WASTE GENERATE A F006 OR F019 SLUDGE?
- ☐ ☒ IS THIS WASTE SUBJECT TO CATEGORICAL PRETREATMENT DISCHARGE STANDARDS?
 IF YES, SPECIFY POINT SOURCE CATEGORY LISTED IN 40 CFR PART 401. _____
- ☐ ☒ IS THIS WASTE REGULATED UNDER THE BENZENE NESHAP RULES? (IS THIS WASTE FROM A CHEMICAL MANUFACTURING, COKE BY-PRODUCT RECOVERY, OR PETROLEUM REFINERY PROCESS?)
- ☐ ☒ DOES THIS WASTE CONTAIN VOC'S IN CONCENTRATIONS ≥ 500 PPM?
- ☐ ☒ DOES THIS WASTE CONTAIN GREATER THAN 20% OF ORGANIC CONSTITUENTS WITH A VAPOR PRESSURE $\geq .3$ KPA (.44 psia)?
- ☐ ☒ DOES THIS WASTE CONTAIN AN ORGANIC CONSTITUENT WHICH IN ITS PURE FORM HAS A VAPOR PRESSURE GREATER THAN 77 Kpa (11.2psia)?

G. D.O.T. INFORMATION: List all shipping names that may be used. Attach additional page if necessary.D.O.T SHIPPING NAME Non-RCRA Regulated Solid (Soil)

DOT HAZARD CLASS: _____

UN/NA# _____ PACKING GROUP (Circle 1) I II III HAZARD ZONE (Circle 1) A B C D

WILL THIS SHIPPING NAME VARY? ☐ Y ☒ N IF YES, WILL ASSIGNMENT OF PROPER SHIPPING NAME BE BASED ON ☐ KNOWLEDGE OR ☐ TESTING? (check one)
 IF KNOWLEDGE, DESCRIBE BASIS OF KNOWLEDGE: _____

H. TRANSPORTATION REQUIREMENTSESTIMATED SHIPMENT FREQUENCY: ☒ ONE TIME ☐ WEEKLY ☐ SEMI-MONTHLY ☐ MONTHLY ☐ QUARTERLY ☐ OTHER _____☐ BULK LIQUID

GALLONS/SHIPMENT: _____ GAL
☐ FROM TANKS: TANK SIZE _____ GAL
☐ FROM DRUMS

VEHICLE TYPE:

- ☐ VAC TRUCK
☐ TANK TRUCK
☐ RAILROAD TANK CAR

CHECK COMPATIBLE STORAGE MATERIALS:

- ☐ STEEL ☐ STAINLESS STEEL(316)
☐ RUBBER LINED ☐ FIBERGLASS LINED
☐ OTHER _____

☒ BULK SOLID

APX 22 TON PER SHIPMENT
 STORAGE CAPACITY _____ TON/YD
 VEHICLE TYPE:

- ☒ DUMP TRAILER
☒ ROLL OFF BOX
☐ INTERMODAL ROLL OFF BOX
☐ CUSCO/FACTOR
☐ OTHER _____

☐ CONTAINERIZED

CONTAINERS/SHIPMENT
 STORAGE CAPACITY: _____ CONTAINERS

CONTAINER TYPE:

- ☐
- CUBIC YARD BOX

- ☐
- PALLET

- ☐
- TOTE TANK

- ☐
- DRUMS SIZE: _____

CONTAINER MATERIAL:

- ☐ STEEL
☐ FIBER
☐ PLASTIC
☐ OTHER _____

I. SAMPLE STATUSREPRESENTATIVE SAMPLE HAS BEEN SUPPLIED. ☐ YES ☒ NO SAMPLED BY _____ DATE SAMPLED _____**J. SPECIFIC DISPOSAL RESTRICTION OR REQUESTS:**

SPECIAL WASTE HANDLING REQUIREMENTS: _____

OTHER COMMENTS OR REQUESTS: _____

J. BIENNIAL/ANNUAL REPORTING INFORMATION.

SIC CODE _____ SOURCE CODE _____ FORM CODE _____ ORIGIN CODE _____

GENERATOR'S CERTIFICATION

I hereby certify that all information submitted in this and attached documents is correct to the best of my knowledge. I also certify that any samples submitted are representative of the actual waste. If Clean Harbors discovers a discrepancy during the approval process, Generator grants Clean Harbors the authority to amend the profile, as Clean Harbors deems necessary, to reflect the discrepancy.

AUTHORIZED SIGNATURE

NAME (PRINT)

TITLE

DATE

Merkle D Reynolds
 FOR CLEAN HARBORS USE ONLY

Merkle D Reynolds

Env Prot Spec

9/29/03

CHI REPRESENTATIVE COMPLETING PROFILE: _____



CERTIFICATE OF DISPOSAL

TOOELE ARMY DEPOT
LARRY MCFARLAND
SJMT-CS-EO BLDG 8
TOOELE

UT 84074

Clean Harbors Grassy Mountain Facility, an Oklahoma corporation duly permitted and operating under the approval of the Utah State Department of Environmental Quality does hereby certify that the hazardous or non-hazardous waste of

Generator: TOOELE ARMY DEPOT

EPA ID#: UT3213820894

Manifest: N4001

Quantity: 56,060

Date: 10/15/03

Disposal Location: C5,K6,7

has been disposed of at the Grassy Mountain Facility, located in Tooele County, Utah and that such treatment, neutralization and disposal has been accomplished in accordance with all applicable rules and regulations of the State of Utah and the U.S. EPA.

Clean Harbors Grassy Mountain, LLC
Grassy Mountain Facility
EPA ID # UTD9913001748

A handwritten signature in dark ink, appearing to read "Gary L. Mossor", is written over a horizontal line.

Gary L. Mossor, General Manager



CERTIFICATE OF DISPOSAL

TOOELE ARMY DEPOT
LARRY MCFARLAND
SJMT-CD-EO BLDG 8
TOOELE

UT 84074

Clean Harbors Grassy Mountain Facility, an Oklahoma corporation duly permitted and operating under the approval of the Utah State Department of Environmental Quality does hereby certify that the hazardous or non-hazardous waste of

Generator: TOOELE ARMY DEPOT

EPA ID#: UT3213820894

Manifest: N4002

Quantity: 66,640

Date: 10/15/03

Disposal Location: C5,K6,7

has been disposed of at the Grassy Mountain Facility, located in Tooele County, Utah and that such treatment, neutralization and disposal has been accomplished in accordance with all applicable rules and regulations of the State of Utah and the U.S. EPA.

Clean Harbors Grassy Mountain, LLC
Grassy Mountain Facility
EPA ID # UTD9913001748

A handwritten signature in cursive script, appearing to read "Gary L. Mossor".

Gary L. Mossor, General Manager



CERTIFICATE OF DISPOSAL

TOOELE ARMY DEPOT
LARRY MCFARLAND
SJMT-CS-EO BLDG 8
TOOELE

UT 84074

Clean Harbors Grassy Mountain Facility, an Oklahoma corporation duly permitted and operating under the approval of the Utah State Department of Environmental Quality does hereby certify that the hazardous or non-hazardous waste of

Generator: TOOELE ARMY DEPOT

EPA ID#: UT3213820894

Manifest: N4003

Quantity: 40,760

Date: 10/15/03

Disposal Location: C5,E6,7

has been disposed of at the Grassy Mountain Facility, located in Tooele County, Utah and that such treatment, neutralization and disposal has been accomplished in accordance with all applicable rules and regulations of the State of Utah and the U.S. EPA.

Clean Harbors Grassy Mountain, LLC
Grassy Mountain Facility
EPA ID # UTD9913001748

A handwritten signature in cursive script, appearing to read "Gary L. Mossor".

Gary L. Mossor, General Manager



CERTIFICATE OF DISPOSAL

TOOELE ARMY DEPOT
LARRY MCFARLAND
SJMT-CS-EO BLDG 8
TOOELE

UT 84074

Clean Harbors Grassy Mountain Facility, an Oklahoma corporation duly permitted and operating under the approval of the Utah State Department of Environmental Quality does hereby certify that the hazardous or non-hazardous waste of

Generator:	TOOELE ARMY DEPOT	EPA ID#:	UT3213820894
Manifest:	N4004	Quantity:	63,980
Date:	10/15/03	Disposal Location:	C5,K6,7

has been disposed of at the Grassy Mountain Facility, located in Tooele County, Utah and that such treatment, neutralization and disposal has been accomplished in accordance with all applicable rules and regulations of the State of Utah and the U.S. EPA.

Clean Harbors Grassy Mountain, LLC
Grassy Mountain Facility
EPA ID # UTD9913001748

A handwritten signature in cursive script, appearing to read "Gary L. Mossor".

Gary L. Mossor, General Manager



CERTIFICATE OF DISPOSAL

TOOELE ARMY DEPOT
LARRY MCFARLAND
SJMT-CS-EO BLDG 8
TOOELE

UT 84074

Clean Harbors Grassy Mountain Facility, an Oklahoma corporation duly permitted and operating under the approval of the Utah State Department of Environmental Quality does hereby certify that the hazardous or non-hazardous waste of

Generator: TOOELE ARMY DEPOT

EPA ID#: UT3213820894

Manifest: N4005

Quantity: 30,480

Date: 10/15/03

Disposal Location: C5,E6,7

has been disposed of at the Grassy Mountain Facility, located in Tooele County, Utah and that such treatment, neutralization and disposal has been accomplished in accordance with all applicable rules and regulations of the State of Utah and the U.S. EPA.

Clean Harbors Grassy Mountain, LLC
Grassy Mountain Facility
EPA ID # UTD9913001748

A handwritten signature in black ink, appearing to read "Gary L. Mossor".

Gary L. Mossor, General Manager



CERTIFICATE OF DISPOSAL

TOOELE ARMY DEPOT
LARRY MCFARLAND
SMT-CS-EO BLDG 8
TOOELE

UT 84074

Clean Harbors Grassy Mountain Facility, an Oklahoma corporation duly permitted and operating under the approval of the Utah State Department of Environmental Quality does hereby certify that the hazardous or non-hazardous waste of

Generator: TOOELE ARMY DEPOT

EPA ID#: UT3213820894

Manifest: N4006

Quantity: 42,520

Date: 10/17/03

Disposal Location: C5,E7,7

has been disposed of at the Grassy Mountain Facility, located in Tooele County, Utah and that such treatment, neutralization and disposal has been accomplished in accordance with all applicable rules and regulations of the State of Utah and the U.S. EPA.

Clean Harbors Grassy Mountain, LLC
Grassy Mountain Facility
EPA ID # UTD9913001748

A handwritten signature in cursive script, appearing to read "Gary L. Mossor".

Gary L. Mossor, General Manager



CERTIFICATE OF DISPOSAL

TOOELE ARMY DEPOT
LARRY MCFARLAND
SJMT-CS-EO BLDG 8
TOOELE

UT 84074

Clean Harbors Grassy Mountain Facility, an Oklahoma corporation duly permitted and operating under the approval of the Utah State Department of Environmental Quality does hereby certify that the hazardous or non-hazardous waste of

Generator: TOOELE ARMY DEPOT

EPA ID#: UT3213820894

Manifest: N4007

Quantity: 57,140

Date: 10/16/03

Disposal Location: C5,C2,6

has been disposed of at the Grassy Mountain Facility, located in Tooele County, Utah and that such treatment, neutralization and disposal has been accomplished in accordance with all applicable rules and regulations of the State of Utah and the U.S. EPA.

Clean Harbors Grassy Mountain, LLC
Grassy Mountain Facility
EPA ID # UTD9913001748

A handwritten signature in cursive script, appearing to read "Gary L. Mossor".

Gary L. Mossor, General Manager



CERTIFICATE OF DISPOSAL

TOOELE ARMY DEPOT
LARRY MCFARLAND
SJMT-CS-EO BLDG 8
TOOELE

UT 84074

Clean Harbors Grassy Mountain Facility, an Oklahoma corporation duly permitted and operating under the approval of the Utah State Department of Environmental Quality does hereby certify that the hazardous or non-hazardous waste of

Generator: TOOELE ARMY DEPOT
Manifest: N4008
Date: 10/16/03

EPA ID#: UT3213820894
Quantity: 58,000
Disposal Location: C5,C2,6

has been disposed of at the Grassy Mountain Facility, located in Tooele County, Utah and that such treatment, neutralization and disposal has been accomplished in accordance with all applicable rules and regulations of the State of Utah and the U.S. EPA.

Clean Harbors Grassy Mountain, LLC
Grassy Mountain Facility
EPA ID # UTD9913001748

A handwritten signature in dark ink, appearing to read "Gary L. Mossor", is written over a horizontal line.

Gary L. Mossor, General Manager



CERTIFICATE OF DISPOSAL

TOOELE ARMY DEPOT
LARRY MCFARLAND
S/JMT-CS-EO BLDG 8
TOOELE

UT 84074

Clean Harbors Grassy Mountain Facility, an Oklahoma corporation duly permitted and operating under the approval of the Utah State Department of Environmental Quality does hereby certify that the hazardous or non-hazardous waste of

Generator: TOOELE ARMY DEPOT

EPA ID#: UT3213820894

Manifest: N4009

Quantity: 41,320

Date: 10/17/03

Disposal Location: C5,B5,7

has been disposed of at the Grassy Mountain Facility, located in Tooele County, Utah and that such treatment, neutralization and disposal has been accomplished in accordance with all applicable rules and regulations of the State of Utah and the U.S. EPA.

Clean Harbors Grassy Mountain, LLC
Grassy Mountain Facility
EPA ID # UTD9913001748

A handwritten signature in cursive script, appearing to read "Gary L. Mossor".

Gary L. Mossor, General Manager



CERTIFICATE OF DISPOSAL

TOOELE ARMY DEPOT
LARRY MCFARLAND
SJMT-CS-EO BLDG 8
TOOELE

UT 84074

Clean Harbors Grassy Mountain Facility, an Oklahoma corporation duly permitted and operating under the approval of the Utah State Department of Environmental Quality does hereby certify that the hazardous or non-hazardous waste of

Generator: TOOELE ARMY DEPOT

EPA ID#: UT3213820894

Manifest: N4010

Quantity: 47,720

Date: 10/17/03

Disposal Location: C5,B4,7

has been disposed of at the Grassy Mountain Facility, located in Tooele County, Utah and that such treatment, neutralization and disposal has been accomplished in accordance with all applicable rules and regulations of the State of Utah and the U.S. EPA.

Clean Harbors Grassy Mountain, LLC
Grassy Mountain Facility
EPA ID # UTD9913001748

A handwritten signature in cursive script, appearing to read "Gary L. Mossor".

Gary L. Mossor, General Manager



CERTIFICATE OF DISPOSAL

TOOELE ARMY DEPOT
LARRY MCFARLAND
SJMT-CS-EO BLDG 8
TOOELE

UT 84074

Clean Harbors Grassy Mountain Facility, an Oklahoma corporation duly permitted and operating under the approval of the Utah State Department of Environmental Quality does hereby certify that the hazardous or non-hazardous waste of

Generator: TOOELE ARMY DEPOT

EPA ID#: UT3213820894

Manifest: N4011

Quantity: 54,140

Date: 10/16/03

Disposal Location: C5,B3,6

has been disposed of at the Grassy Mountain Facility, located in Tooele County, Utah and that such treatment, neutralization and disposal has been accomplished in accordance with all applicable rules and regulations of the State of Utah and the U.S. EPA.

Clean Harbors Grassy Mountain, LLC
Grassy Mountain Facility
EPA ID # UTD9913001748

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Gary L. Mossor, General Manager



CERTIFICATE OF DISPOSAL

TOOELE ARMY DEPOT
LARRY MCFARLAND
SJMT-CS-EO BLDG 8
TOOELE

UT 84074

Clean Harbors Grassy Mountain Facility, an Oklahoma corporation duly permitted and operating under the approval of the Utah State Department of Environmental Quality does hereby certify that the hazardous or non-hazardous waste of

Generator: TOOELE ARMY DEPOT

EPA ID#: UT3213820894

Manifest: N4012

Quantity: 54,200

Date: 10/16/03

Disposal Location: C5,B3,6

has been disposed of at the Grassy Mountain Facility, located in Tooele County, Utah and that such treatment, neutralization and disposal has been accomplished in accordance with all applicable rules and regulations of the State of Utah and the U.S. EPA.

Clean Harbors Grassy Mountain, LLC
Grassy Mountain Facility
EPA ID # UTD9913001748

A handwritten signature in cursive script, appearing to read "Gary L. Mossor".

Gary L. Mossor, General Manager



CERTIFICATE OF DISPOSAL

TOOELE ARMY DEPOT
LARRY MCFARLAND
SJMT-CS-EO BLDG 8
TOOELE

UT 84074

Clean Harbors Grassy Mountain Facility, an Oklahoma corporation duly permitted and operating under the approval of the Utah State Department of Environmental Quality does hereby certify that the hazardous or non-hazardous waste of

Generator: TOOELE ARMY DEPOT

EPA ID#: UT3213820894

Manifest: N4013

Quantity: 52,520

Date: 10/16/03

Disposal Location: C5,B3,6

has been disposed of at the Grassy Mountain Facility, located in Tooele County, Utah and that such treatment, neutralization and disposal has been accomplished in accordance with all applicable rules and regulations of the State of Utah and the U.S. EPA.

Clean Harbors Grassy Mountain, LLC
Grassy Mountain Facility
EPA ID # UTD9913001748

A handwritten signature in dark ink, appearing to read "Gary L. Mossor", is written over a horizontal line.

Gary L. Mossor, General Manager



CERTIFICATE OF DISPOSAL

TOOELE ARMY DEPOT
LARRY MCFARLAND
SJMT-CS-EO BLDG 8
TOOELE

UT 84074

Clean Harbors Grassy Mountain Facility, an Oklahoma corporation duly permitted and operating under the approval of the Utah State Department of Environmental Quality does hereby certify that the hazardous or non-hazardous waste of

Generator: TOOELE ARMY DEPOT

EPA ID#: UT3213820894

Manifest: N4014

Quantity: 56,060

Date: 10/16/03

Disposal Location: C5,B5,6

has been disposed of at the Grassy Mountain Facility, located in Tooele County, Utah and that such treatment, neutralization and disposal has been accomplished in accordance with all applicable rules and regulations of the State of Utah and the U.S. EPA.

Clean Harbors Grassy Mountain, LLC
Grassy Mountain Facility
EPA ID # UTD9913001748

A handwritten signature in cursive script, appearing to read "Gary L. Mossor".

Gary L. Mossor, General Manager



CERTIFICATE OF DISPOSAL

TOOELE ARMY DEPOT
LARRY MCFARLAND
SJMT-CS-EO BLDG 8
TOOELE

UT 84074

Clean Harbors Grassy Mountain Facility, an Oklahoma corporation duly permitted and operating under the approval of the Utah State Department of Environmental Quality does hereby certify that the hazardous or non-hazardous waste of

Generator: TOOELE ARMY DEPOT

EPA ID#: UT3213820894

Manifest: N4015

Quantity: 26,480

Date: 10/17/03

Disposal Location: C5,A4,7

has been disposed of at the Grassy Mountain Facility, located in Tooele County, Utah and that such treatment, neutralization and disposal has been accomplished in accordance with all applicable rules and regulations of the State of Utah and the U.S. EPA.

Clean Harbors Grassy Mountain, LLC
Grassy Mountain Facility
EPA ID # UTD9913001748

A handwritten signature in dark ink, appearing to read "Gary L. Mossor".

Gary L. Mossor, General Manager



CERTIFICATE OF DISPOSAL

TOOELE ARMY DEPOT
LARRY MCFARLAND
SJMT-CS-EO BLDG 8
TOOELE

UT 84074

Clean Harbors Grassy Mountain Facility, an Oklahoma corporation duly permitted and operating under the approval of the Utah State Department of Environmental Quality does hereby certify that the hazardous or non-hazardous waste of

Generator: TOOELE ARMY DEPOT

EPA ID#: UT3213820894

Manifest: N4016

Quantity: 59,360

Date: 10/16/03

Disposal Location: C5,B5,6

has been disposed of at the Grassy Mountain Facility, located in Tooele County, Utah and that such treatment, neutralization and disposal has been accomplished in accordance with all applicable rules and regulations of the State of Utah and the U.S. EPA.

Clean Harbors Grassy Mountain, LLC
Grassy Mountain Facility
EPA ID # UTD9913001748

A handwritten signature in cursive script, appearing to read "Gary L. Mossor".

Gary L. Mossor, General Manager



CERTIFICATE OF DISPOSAL

TOOELE ARMY DEPOT
LARRY MCFARLAND
SJMT-CS-EO BLDG 8
TOOELE

UT 84074

Clean Harbors Grassy Mountain Facility, an Oklahoma corporation duly permitted and operating under the approval of the Utah State Department of Environmental Quality does hereby certify that the hazardous or non-hazardous waste of

Generator: TOOELE ARMY DEPOT

EPA ID#: UT3213820894

Manifest: N4017

Quantity: 46,020

Date: 10/16/03

Disposal Location: C5,B4,6

has been disposed of at the Grassy Mountain Facility, located in Tooele County, Utah and that such treatment, neutralization and disposal has been accomplished in accordance with all applicable rules and regulations of the State of Utah and the U.S. EPA.

Clean Harbors Grassy Mountain, LLC
Grassy Mountain Facility
EPA ID # UTD9913001748

A handwritten signature in cursive script, appearing to read "Gary L. Mossor".

Gary L. Mossor, General Manager



CERTIFICATE OF DISPOSAL

TOOELE ARMY DEPOT
LARRY MCFARLAND
SJMT-CS-EO BLDG 8
TOOELE

UT 84074

Clean Harbors Grassy Mountain Facility, an Oklahoma corporation duly permitted and operating under the approval of the Utah State Department of Environmental Quality does hereby certify that the hazardous or non-hazardous waste of

Generator: TOOELE ARMY DEPOT

EPA ID#: UT3213820894

Manifest: N4018

Quantity: 58,020

Date: 10/16/03

Disposal Location: C5,B4,6

has been disposed of at the Grassy Mountain Facility, located in Tooele County, Utah and that such treatment, neutralization and disposal has been accomplished in accordance with all applicable rules and regulations of the State of Utah and the U.S. EPA.

Clean Harbors Grassy Mountain, LLC
Grassy Mountain Facility
EPA ID # UTD9913001748

A handwritten signature in cursive script, appearing to read "Gary L. Mossor", is written over a horizontal line.

Gary L. Mossor, General Manager



CERTIFICATE OF DISPOSAL

TOOELE ARMY DEPOT
LARRY MCFARLAND
SMT-CS-EO BLDG 8
TOOELE

UT 84074

Clean Harbors Grassy Mountain Facility, an Oklahoma corporation duly permitted and operating under the approval of the Utah State Department of Environmental Quality does hereby certify that the hazardous or non-hazardous waste of

Generator: TOOELE ARMY DEPOT
Manifest: N4019
Date: 10/16/03

EPA ID#: UT3213820894
Quantity: 48,960
Disposal Location: C5,B5,6

has been disposed of at the Grassy Mountain Facility, located in Tooele County, Utah and that such treatment, neutralization and disposal has been accomplished in accordance with all applicable rules and regulations of the State of Utah and the U.S. EPA.

Clean Harbors Grassy Mountain, LLC
Grassy Mountain Facility
EPA ID # UTD9913001748

A handwritten signature in dark ink, appearing to read "Gary L. Mossor".

Gary L. Mossor, General Manager



CERTIFICATE OF DISPOSAL

TOOELE ARMY DEPOT
LARRY MCFARLAND
SJMT-CS-EO BLDG 8
TOOELE

UT 84074

Clean Harbors Grassy Mountain Facility, an Oklahoma corporation duly permitted and operating under the approval of the Utah State Department of Environmental Quality does hereby certify that the hazardous or non-hazardous waste of

Generator: TOOELE ARMY DEPOT

EPA ID#: UT3213820894

Manifest: N4020

Quantity: 29,560

Date: 10/17/03

Disposal Location: C5,B5,7

has been disposed of at the Grassy Mountain Facility, located in Tooele County, Utah and that such treatment, neutralization and disposal has been accomplished in accordance with all applicable rules and regulations of the State of Utah and the U.S. EPA.

Clean Harbors Grassy Mountain, LLC
Grassy Mountain Facility
EPA ID # UTD9913001748

A handwritten signature in dark ink, appearing to read "Gary L. Mossor", is written over a horizontal line.

Gary L. Mossor, General Manager



CERTIFICATE OF DISPOSAL

TOOELE ARMY DEPOT
LARRY MCFARLAND
SJMT-CS-EO BLDG 8
TOOELE

UT 84074

Clean Harbors Grassy Mountain Facility, an Oklahoma corporation duly permitted and operating under the approval of the Utah State Department of Environmental Quality does hereby certify that the hazardous or non-hazardous waste of

Generator: TOOELE ARMY DEPOT

EPA ID#: UT3213820894

Manifest: N4021

Quantity: 57,960

Date: 10/17/03

Disposal Location: C5,E7,7

has been disposed of at the Grassy Mountain Facility, located in Tooele County, Utah and that such treatment, neutralization and disposal has been accomplished in accordance with all applicable rules and regulations of the State of Utah and the U.S. EPA.

Clean Harbors Grassy Mountain, LLC
Grassy Mountain Facility
EPA ID # UTD9913001748

A handwritten signature in cursive script, appearing to read "Gary L. Mossor".

Gary L. Mossor, General Manager



CERTIFICATE OF DISPOSAL

TOOELE ARMY DEPOT
LARRY MCFARLAND
SJMT-CS-EO BLDG 8
TOOELE

UT 84074

Clean Harbors Grassy Mountain Facility, an Oklahoma corporation duly permitted and operating under the approval of the Utah State Department of Environmental Quality does hereby certify that the hazardous or non-hazardous waste of

Generator: TOOELE ARMY DEPOT

EPA ID#: UT3213820894

Manifest: N4022

Quantity: 26,800

Date: 10/17/03

Disposal Location: C5,F7,7

has been disposed of at the Grassy Mountain Facility, located in Tooele County, Utah and that such treatment, neutralization and disposal has been accomplished in accordance with all applicable rules and regulations of the State of Utah and the U.S. EPA.

Clean Harbors Grassy Mountain, LLC
Grassy Mountain Facility
EPA ID # UTD9913001748

A handwritten signature in cursive script, appearing to read "Gary L. Mossor".

Gary L. Mossor, General Manager



CERTIFICATE OF DISPOSAL

TOOELE ARMY DEPOT
LARRY MCFARLAND
SJM-T-CS-EO BLDG 8
TOOELE

UT 84074

Clean Harbors Grassy Mountain Facility, an Oklahoma corporation duly permitted and operating under the approval of the Utah State Department of Environmental Quality does hereby certify that the hazardous or non-hazardous waste of

Generator: TOOELE ARMY DEPOT

EPA ID#: UT3213820894

Manifest: N4023

Quantity: 29,100

Date: 10/20/03

Disposal Location: C5,B4,6

has been disposed of at the Grassy Mountain Facility, located in Tooele County, Utah and that such treatment, neutralization and disposal has been accomplished in accordance with all applicable rules and regulations of the State of Utah and the U.S. EPA.

Clean Harbors Grassy Mountain, LLC
Grassy Mountain Facility
EPA ID # UTD9913001748

A handwritten signature in dark ink, appearing to read "Gary L. Mossor", is written over a horizontal line.

Gary L. Mossor, General Manager



CERTIFICATE OF DISPOSAL

TOOELE ARMY DEPOT
LARRY MCFARLAND
SJMT-CS-EO BLDG 8
TOOELE

UT 84074

Clean Harbors Grassy Mountain Facility, an Oklahoma corporation duly permitted and operating under the approval of the Utah State Department of Environmental Quality does hereby certify that the hazardous or non-hazardous waste of

Generator: TOOELE ARMY DEPOT

EPA ID#: UT3213820894

Manifest: N4024

Quantity: 28,500

Date: 10/20/03

Disposal Location: C5,A2,7

has been disposed of at the Grassy Mountain Facility, located in Tooele County, Utah and that such treatment, neutralization and disposal has been accomplished in accordance with all applicable rules and regulations of the State of Utah and the U.S. EPA.

Clean Harbors Grassy Mountain, LLC
Grassy Mountain Facility
EPA ID # UTD9913001748

A handwritten signature in cursive script, appearing to read "Gary L. Mossor".

Gary L. Mossor, General Manager



CERTIFICATE OF DISPOSAL

TOOELE ARMY DEPOT
LARRY MCFARLAND
SJMT-CS-EO BLDG 8
TOOELE

UT 84074

Clean Harbors Grassy Mountain Facility, an Oklahoma corporation duly permitted and operating under the approval of the Utah State Department of Environmental Quality does hereby certify that the hazardous or non-hazardous waste of

Generator: TOOELE ARMY DEPOT

EPA ID#: UT3213820894

Manifest: N4025

Quantity: 55,560

Date: 10/20/03

Disposal Location: C5,B4,5

has been disposed of at the Grassy Mountain Facility, located in Tooele County, Utah and that such treatment, neutralization and disposal has been accomplished in accordance with all applicable rules and regulations of the State of Utah and the U.S. EPA.

Clean Harbors Grassy Mountain, LLC
Grassy Mountain Facility
EPA ID # UTD9913001748

A handwritten signature in cursive script, appearing to read "Gary L. Mossor".

Gary L. Mossor, General Manager



CERTIFICATE OF DISPOSAL

TOOELE ARMY DEPOT
LARRY MCFARLAND
SJMT-CS-EO BLDG 8
TOOELE

UT 84074

Clean Harbors Grassy Mountain Facility, an Oklahoma corporation duly permitted and operating under the approval of the Utah State Department of Environmental Quality does hereby certify that the hazardous or non-hazardous waste of

Generator: TOOELE ARMY DEPOT

EPA ID#: UT3213820894

Manifest: N4026

Quantity: 66,540

Date: 10/20/03

Disposal Location: C5,B4,6

has been disposed of at the Grassy Mountain Facility, located in Tooele County, Utah and that such treatment, neutralization and disposal has been accomplished in accordance with all applicable rules and regulations of the State of Utah and the U.S. EPA.

Clean Harbors Grassy Mountain, LLC
Grassy Mountain Facility
EPA ID # UTD9913001748

A handwritten signature in dark ink, appearing to read "Gary L. Mossor", is written over a horizontal line.

Gary L. Mossor, General Manager



CERTIFICATE OF DISPOSAL

TOOELE ARMY DEPOT
LARRY MCFARLAND
SJMT-CS-EO BLDG 8
TOOELE

UT 84074

Clean Harbors Grassy Mountain Facility, an Oklahoma corporation duly permitted and operating under the approval of the Utah State Department of Environmental Quality does hereby certify that the hazardous or non-hazardous waste of

Generator: TOOELE ARMY DEPOT

EPA ID#: UT3213820894

Manifest: N4027

Quantity: 28,760

Date: 10/21/03

Disposal Location: C5,C4,6

has been disposed of at the Grassy Mountain Facility, located in Tooele County, Utah and that such treatment, neutralization and disposal has been accomplished in accordance with all applicable rules and regulations of the State of Utah and the U.S. EPA.

Clean Harbors Grassy Mountain, LLC
Grassy Mountain Facility
EPA ID # UTD9913001748

A handwritten signature in cursive script, appearing to read "Gary L. Mossor", is written over a horizontal line.

Gary L. Mossor, General Manager



CERTIFICATE OF DISPOSAL

TOOELE ARMY DEPOT
LARRY MCFARLAND
SJMT-CS-EO BLDG 8
TOOELE

UT 84074

Clean Harbors Grassy Mountain Facility, an Oklahoma corporation duly permitted and operating under the approval of the Utah State Department of Environmental Quality does hereby certify that the hazardous or non-hazardous waste of

Generator: TOOELE ARMY DEPOT

EPA ID#: UT3213820894

Manifest: N4028

Quantity: 55,540

Date: 10/20/03

Disposal Location: C5,B4,6

has been disposed of at the Grassy Mountain Facility, located in Tooele County, Utah and that such treatment, neutralization and disposal has been accomplished in accordance with all applicable rules and regulations of the State of Utah and the U.S. EPA.

Clean Harbors Grassy Mountain, LLC
Grassy Mountain Facility
EPA ID # UTD9913001748

A handwritten signature in cursive script, appearing to read "Gary L. Mossor".

Gary L. Mossor, General Manager



CERTIFICATE OF DISPOSAL

TOOELE ARMY DEPOT
LARRY MCFARLAND
SJMT-CS-EO BLDG 8
TOOELE

UT 84074

Clean Harbors Grassy Mountain Facility, an Oklahoma corporation duly permitted and operating under the approval of the Utah State Department of Environmental Quality does hereby certify that the hazardous or non-hazardous waste of

Generator: TOOELE ARMY DEPOT

EPA ID#: UT3213820894

Manifest: N4029

Quantity: 26,660

Date: 10/22/03

Disposal Location: C5,B5,7

has been disposed of at the Grassy Mountain Facility, located in Tooele County, Utah and that such treatment, neutralization and disposal has been accomplished in accordance with all applicable rules and regulations of the State of Utah and the U.S. EPA.

Clean Harbors Grassy Mountain, LLC
Grassy Mountain Facility
EPA ID # UTD9913001748

A handwritten signature in black ink, appearing to read "Gary L. Mossor".

Gary L. Mossor, General Manager



CERTIFICATE OF DISPOSAL

TOOELE ARMY DEPOT
LARRY MCFARLAND
SJMT-CS-EO BLDG 8
TOOELE

UT 84074

Clean Harbors Grassy Mountain Facility, an Oklahoma corporation duly permitted and operating under the approval of the Utah State Department of Environmental Quality does hereby certify that the hazardous or non-hazardous waste of

Generator: TOOELE ARMY DEPOT

EPA ID#: UT3213820894

Manifest: N4030

Quantity: 44,580

Date: 10/20/03

Disposal Location: C5,B4,6

has been disposed of at the Grassy Mountain Facility, located in Tooele County, Utah and that such treatment, neutralization and disposal has been accomplished in accordance with all applicable rules and regulations of the State of Utah and the U.S. EPA.

Clean Harbors Grassy Mountain, LLC
Grassy Mountain Facility
EPA ID # UTD9913001748

A handwritten signature in dark ink, appearing to read "Gary L. Mossor", is written over a horizontal line.

Gary L. Mossor, General Manager



CERTIFICATE OF DISPOSAL

TOOELE ARMY DEPOT
LARRY MCFARLAND
SJMT-CS-EO BLDG 8
TOOELE

UT 84074

Clean Harbors Grassy Mountain Facility, an Oklahoma corporation duly permitted and operating under the approval of the Utah State Department of Environmental Quality does hereby certify that the hazardous or non-hazardous waste of

Generator: TOOELE ARMY DEPOT

EPA ID#: UT323820894

Manifest: N4031

Quantity: 48,240

Date: 10/20/03

Disposal Location: C5,A4,6

has been disposed of at the Grassy Mountain Facility, located in Tooele County, Utah and that such treatment, neutralization and disposal has been accomplished in accordance with all applicable rules and regulations of the State of Utah and the U.S. EPA.

Clean Harbors Grassy Mountain, LLC
Grassy Mountain Facility
EPA ID # UTD9913001748

A handwritten signature in cursive script, appearing to read "Gary L. Mossor".

Gary L. Mossor, General Manager



CERTIFICATE OF DISPOSAL

TOOELE ARMY DEPOT
LARRY MCFARLAND
SJMT-CS-EO BLDG 8
TOOELE

UT 84074

Clean Harbors Grassy Mountain Facility, an Oklahoma corporation duly permitted and operating under the approval of the Utah State Department of Environmental Quality does hereby certify that the hazardous or non-hazardous waste of

Generator: TOOELE ARMY DEPOT

EPA ID#: UT3213820894

Manifest: N4032

Quantity: 27,700

Date: 10/20/03

Disposal Location: C5,A4,7

has been disposed of at the Grassy Mountain Facility, located in Tooele County, Utah and that such treatment, neutralization and disposal has been accomplished in accordance with all applicable rules and regulations of the State of Utah and the U.S. EPA.

Clean Harbors Grassy Mountain, LLC
Grassy Mountain Facility
EPA ID # UTD9913001748

A handwritten signature in black ink, appearing to read "Gary L. Mossor".

Gary L. Mossor, General Manager



CERTIFICATE OF DISPOSAL

TOOELE ARMY DEPOT
LARRY MCFARLAND
SMT-CS-EO BLDG 8
TOOELE

UT 84074

Clean Harbors Grassy Mountain Facility, an Oklahoma corporation duly permitted and operating under the approval of the Utah State Department of Environmental Quality does hereby certify that the hazardous or non-hazardous waste of

Generator: TOOELE ARMY DEPOT
Manifest: N4033
Date: 10/21/03

EPA ID#: UT3213820894
Quantity: 27,840
Disposal Location: C5,B4,6

has been disposed of at the Grassy Mountain Facility, located in Tooele County, Utah and that such treatment, neutralization and disposal has been accomplished in accordance with all applicable rules and regulations of the State of Utah and the U.S. EPA.

Clean Harbors Grassy Mountain, LLC
Grassy Mountain Facility
EPA ID # UTD9913001748

A handwritten signature in black ink, appearing to read "Gary L. Mossor", is written over a horizontal line.

Gary L. Mossor, General Manager



CERTIFICATE OF DISPOSAL

TOOELE ARMY DEPOT
LARRY MCFARLAND
SMT-CS-EO BLDG 8
TOOELE

UT 84074

Clean Harbors Grassy Mountain Facility, an Oklahoma corporation duly permitted and operating under the approval of the Utah State Department of Environmental Quality does hereby certify that the hazardous or non-hazardous waste of

Generator: TOOELE ARMY DEPOT

EPA ID#: UT3213820894

Manifest: N4034

Quantity: 50,620

Date: 10/20/03

Disposal Location: C5,A2,6

has been disposed of at the Grassy Mountain Facility, located in Tooele County, Utah and that such treatment, neutralization and disposal has been accomplished in accordance with all applicable rules and regulations of the State of Utah and the U.S. EPA.

Clean Harbors Grassy Mountain, LLC
Grassy Mountain Facility
EPA ID # UTD9913001748

A handwritten signature in black ink, appearing to read "Gary L. Mossor".

Gary L. Mossor, General Manager



CERTIFICATE OF DISPOSAL

TOOELE ARMY DEPOT
LARRY MCFARLAND
SJMT-CS-EO BLDG 8
TOOELE

UT 84074

Clean Harbors Grassy Mountain Facility, an Oklahoma corporation duly permitted and operating under the approval of the Utah State Department of Environmental Quality does hereby certify that the hazardous or non-hazardous waste of

Generator: TOOELE ARMY DEPOT

EPA ID#: UT3213820894

Manifest: N4035

Quantity: 63,420

Date: 10/21/03

Disposal Location: C5,B4,6

has been disposed of at the Grassy Mountain Facility, located in Tooele County, Utah and that such treatment, neutralization and disposal has been accomplished in accordance with all applicable rules and regulations of the State of Utah and the U.S. EPA.

Clean Harbors Grassy Mountain, LLC
Grassy Mountain Facility
EPA ID # UTD9913001748

A handwritten signature in dark ink, appearing to read "Gary L. Mossor".

Gary L. Mossor, General Manager



CERTIFICATE OF DISPOSAL

TOOELE ARMY DEPOT
LARRY MCFARLAND
SJMT-CS-EO BLDG 8
TOOELE

UT 84074

Clean Harbors Grassy Mountain Facility, an Oklahoma corporation duly permitted and operating under the approval of the Utah State Department of Environmental Quality does hereby certify that the hazardous or non-hazardous waste of

Generator: TOOELE ARMY DEPOT

EPA ID#: UT3213820894

Manifest: N4036

Quantity: 56,620

Date: 10/20/03

Disposal Location: C5,B4,6

has been disposed of at the Grassy Mountain Facility, located in Tooele County, Utah and that such treatment, neutralization and disposal has been accomplished in accordance with all applicable rules and regulations of the State of Utah and the U.S. EPA.

Clean Harbors Grassy Mountain, LLC
Grassy Mountain Facility
EPA ID # UTD9913001748

A handwritten signature in dark ink, appearing to read "Gary L. Mossor", is written over a horizontal line.

Gary L. Mossor, General Manager



CERTIFICATE OF DISPOSAL

TOOELE ARMY DEPOT
LARRY MCFARLAND
SJMT-CS-EO BLDG 8
TOOELE

UT 84074

Clean Harbors Grassy Mountain Facility, an Oklahoma corporation duly permitted and operating under the approval of the Utah State Department of Environmental Quality does hereby certify that the hazardous or non-hazardous waste of

Generator: TOOELE ARMY DEPOT

EPA ID#: UT3213820894

Manifest: N4037

Quantity: 23,560

Date: 10/21/03

Disposal Location: C5,B6,3

has been disposed of at the Grassy Mountain Facility, located in Tooele County, Utah and that such treatment, neutralization and disposal has been accomplished in accordance with all applicable rules and regulations of the State of Utah and the U.S. EPA.

Clean Harbors Grassy Mountain, LLC
Grassy Mountain Facility
EPA ID # UTD9913001748

A handwritten signature in dark ink, appearing to read "Gary L. Mossor".

Gary L. Mossor, General Manager



CERTIFICATE OF DISPOSAL

TOOELE ARMY DEPOT
LARRY MCFARLAND
SJMT-CS-EO BLDG 8
TOOELE

UT 84074

Clean Harbors Grassy Mountain Facility, an Oklahoma corporation duly permitted and operating under the approval of the Utah State Department of Environmental Quality does hereby certify that the hazardous or non-hazardous waste of

Generator: TOOELE ARMY DEPOT

EPA ID#: UT3213820894

Manifest: N4038

Quantity: 38,660

Date: 10/22/03

Disposal Location: C5,B5,7

has been disposed of at the Grassy Mountain Facility, located in Tooele County, Utah and that such treatment, neutralization and disposal has been accomplished in accordance with all applicable rules and regulations of the State of Utah and the U.S. EPA.

Clean Harbors Grassy Mountain, LLC
Grassy Mountain Facility
EPA ID # UTD9913001748

A handwritten signature in black ink, appearing to read "Gary L. Mossor", is written over a horizontal line.

Gary L. Mossor, General Manager



CERTIFICATE OF DISPOSAL

TOOELE ARMY DEPOT
LARRY MCFARLAND
SJMT-CS-EO BLDG 8
TOOELE

UT 84074

Clean Harbors Grassy Mountain Facility, an Oklahoma corporation duly permitted and operating under the approval of the Utah State Department of Environmental Quality does hereby certify that the hazardous or non-hazardous waste of

Generator: TOOELE ARMY DEPOT

EPA ID#: UT3213820894

Manifest: N4039

Quantity: 55,040

Date: 10/21/03

Disposal Location: C5,M6,7

has been disposed of at the Grassy Mountain Facility, located in Tooele County, Utah and that such treatment, neutralization and disposal has been accomplished in accordance with all applicable rules and regulations of the State of Utah and the U.S. EPA.

Clean Harbors Grassy Mountain, LLC
Grassy Mountain Facility
EPA ID # UTD9913001748

A handwritten signature in cursive script, appearing to read "Gary L. Mossor".

Gary L. Mossor, General Manager

NON-HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. U. T. 3. 2. 1. 3. 8. 2. 0. 8. 9. 4	Manifest Doc. No. 10101	2. Page 1 of 1
3. Generator's Name and Mailing Address Tooele Army Depot SJMT-CS-EO Bldg 8 Attn: Larry McFarland Tooele, UT 84074		4. Generator's Phone (435-) 833-3504		
5. Transporter 1 Company Name MP Environmental Services, Inc.		6. US EPA ID Number C.A.T.0.0.0.6.2.4.2.4.7		A. Transporter's Phone 877-800-5111
7. Transporter 2 Company Name		8. US EPA ID Number		B. Transporter's Phone
9. Designated Facility Name and Site Address Clean Harbors Grassy Mountain, LLC. 3 Mi. E 7 Mi. N of Knolls Exit 41 off I-80 Clive, UT 84029		10. US EPA ID Number U.T.D.9.9.1.3.0.1.7.4.8		C. Facility's Phone 801-323-8900
11. Waste Shipping Name and Description		12. Containers No. Type		13. Total Quantity
a. NON REGULATED MATERIAL, NONE, NONE		0 0 1 CM		Est. 4.9.0.00
b.				P
c.				
d.				
D. Additional Descriptions for Materials Listed Above 11a. CH217789B		E. Handling Codes for Wastes Listed Above		
15. Special Handling Instructions and Additional Information Emergency Telephone Number: Tooele Army Depot 435-833-3504 Truck #: <u>605</u> Container #: <u>3042</u>		U515301		
16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.				
Printed/Typed Name LARRY MCFARLAND		Signature Larry McFarland		Month Day Year 10/14/03
17. Transporter 1 Acknowledgement of Receipt of Materials		Month Day Year		
Printed/Typed Name JOSEPH SHINDER FOR MP		Signature Joseph Shinder		Month Day Year 10/14/03
18. Transporter 2 Acknowledgement of Receipt of Materials		Month Day Year		
Printed/Typed Name		Signature		Month Day Year
19. Discrepancy Indication Space				
20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.				
Printed/Typed Name Larry McFar		Signature Larry McFar		Month Day Year 11/01/03

**NON-HAZARDOUS
WASTE MANIFEST**

1. Generator's US EPA ID No.

U T 3 2 1 3 8 2 0 8 9 4

Manifest Doc. No.

N4002

2. Page 1

of 1

3. Generator's Name and Mailing Address

Tooele Army Depot

SJMTE-CS-EO Bldg 8 Attn: Larry McFarland

4. Generator's Phone ()

435 833-3504

5. Transporter 1 Company Name

MP Environmental Services, Inc.

6. US EPA ID Number

C A T 0 0 0 6 2 4 2 4 7

A. Transporter's Phone

877-800-5111

7. Transporter 2 Company Name

8. US EPA ID Number

B. Transporter's Phone

9. Designated Facility Name and Site Address

Clean Harbors Grassy Mountain, LLC.
3 Mi. E 7 Mi. N of Knolls Exit 41 off I-80
Clive, UT 84029

10. US EPA ID Number

U T D 9 9 1 3 0 1 7 4 8

C. Facility's Phone

801-323-8900

11. Waste Shipping Name and Description

a. NON REGULATED MATERIAL, NONE, NONE

12. Containers

No.

Type

13. Total
Quantity14. Unit
Wt/Vol

0 0 1

CM

Est.

490.00

P

b.

c.

d.

CR

FS

OFFG

D. Additional Descriptions for Materials Listed Above

11a. CH217789B

E. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

Emergency Telephone Number: Tooele Army Depot 435-833-3504

Truck #: 572 Container #: 3040

16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Typed Name

LARRY MCFARLAND

Signature

Larry McFarland

Month Day Year

11 01 03

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name

Richard Orr

Signature

Richard Orr

Month Day Year

11 01 03

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.

Printed/Typed Name

Arthur C. Ponce

Signature

Arthur C. Ponce

Month Day Year

10 05 03

ORIGINAL - RETURN TO GENERATOR

Please print or type
(Form designed for use on elite (12-pitch) typewriter.)

NON-HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. U.T.3.2.1.3.8.2.0.8.9.4	Manifest Doc. No. 14003	2. Page 1 of 1
3. Generator's Name and Mailing Address Tooele Army Depot SJMTE-CS-EO Bldg 8 Attn: Larry McFarland Tooele, Utah, 84074				
4. Generator's Phone (435) 833-3504				
5. Transporter 1 Company Name MP Environmental Services, Inc.		6. US EPA ID Number C.A.T.0.0.0.6.2.4.2.4.7	A. Transporter's Phone 877-800-5111	
7. Transporter 2 Company Name		8. US EPA ID Number	B. Transporter's Phone	
9. Designated Facility Name and Site Address Clean Harbors Grassy Mountain, LLC 3 Mi. E 7 Mi. N of Knolls Exit 41 off I-80 Clive, Utah, 84029		10. US EPA ID Number U.T.D.9.9.1.3.0.1.7.4.8	C. Facility's Phone 801-323-8900	
11. Waste Shipping Name and Description		12. Containers No. Type	13. Total Quantity	14. Unit Wt/Vol
a. NON-REGULATED MATERIAL, NONE, NONE		0.0.1 CM	Est. 44000	P
b.				
c.				
d.				
D. Additional Descriptions for Materials Listed Above 11a. CH217789B		E. Handling Codes for Wastes Listed Above U515089		
15. Special Handling Instructions and Additional Information Emergency Telephone Number: Tooele Army Depot 435-833-3504 Truck #: 579 Container #: 4596				
16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.				
Printed/Typed Name LARRY MCFARLAND		Signature Larry McFarland		Month Day Year 10/15/03
17. Transporter 1 Acknowledgement of Receipt of Materials				
Printed/Typed Name		Signature		Month Day Year 10/15/03
18. Transporter 2 Acknowledgement of Receipt of Materials				
Printed/Typed Name		Signature		Month Day Year
19. Discrepancy Indication Space				
20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19. 200304622				
Printed/Typed Name Anthony Mestas		Signature Anthony Mestas		Month Day Year 10/15/03

Please print or type
(Form designed for use on elite (12-pitch) typewriter.)

NON-HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. U.T.3.2.1.3.8.2.0.8.9.4	Manifest Doc. No. W4004	2. Page 1 of 1
3. Generator's Name and Mailing Address Tooele Army Depot SJMTE-CS-EO Bldg. 8 Attn: Larry McFarland Tooele, UT 84074				
4. Generator's Phone (435) 833-3504				
5. Transporter 1 Company Name MP Environmental Services, Inc.	6. US EPA ID Number C.A.T.0.0.0.6.2.4.2.4.7	A. Transporter's Phone 877-800-5111		
7. Transporter 2 Company Name	8. US EPA ID Number	B. Transporter's Phone		
9. Designated Facility Name and Site Address Clean Harbors Grassy Mountain, LLC. 3 Mi. E 7 Mi. N of Knolls Exit 41 off I-80 Clive, UT 84029		10. US EPA ID Number U.T.D.9.9.1.3.0.1.7.4.8	C. Facility's Phone 323 801-323-8900	
11. Waste Shipping Name and Description		12. Containers No.	13. Total Quantity	14. Unit Wt/Vol
a. NON REGULATED MATERIAL, NONE, NONE		0.0.1	DT	Est. 6.0000 P
b.				
c.				
d.				
D. Additional Descriptions for Materials Listed Above 11a. CH217789B		E. Handling Codes for Wastes Listed Above		
15. Special Handling Instructions and Additional Information Emergency Telephone Number: Tooele Army Depot 435-833-3204 Truck #: <u>571</u> Container #: <u>3041</u>		U514923		
16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.				
Printed/Typed Name LARRY MCFARLAND		Signature <i>Larry McFarland</i>		Month Day Year 11 01 5 03
17. Transporter 1 Acknowledgement of Receipt of Materials				
Printed/Typed Name GARY HILL		Signature <i>Gary Hill</i>		Month Day Year 10 01 5 03
18. Transporter 2 Acknowledgement of Receipt of Materials				
Printed/Typed Name		Signature		Month Day Year
19. Discrepancy Indication Space				
20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.				
Printed/Typed Name Anthony Maestas		Signature <i>Anthony Maestas</i>		Month Day Year 10 15 03

Please print or type
(Form designed for use on elite (12-pitch) typewriter.)

NON-HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. U T 3 2 1 3 8 2 0 8 9 4	Manifest Doc. No. W 4 0 0 5	2. Page 1 of 1
3. Generator's Name and Mailing Address Tooele Army Depot SJMTE-CS-EO Bldg 8 Tooele, UT 84074 Attn: Larry McFarland				
4. Generator's Phone (435) 833-3504				
5. Transporter 1 Company Name MP Environmental Services, Inc.		6. US EPA ID Number C A T 0 0 0 6 2 4 2 4 7	A. Transporter's Phone 877-800-5111	
7. Transporter 2 Company Name		8. US EPA ID Number	B. Transporter's Phone	
9. Designated Facility Name and Site Address Clean Harbors Grassy Mountain LLC. 3 Mi. E 7 Mi. N of Knolls Exit 41 off I-80 Clive, UT 84029		10. US EPA ID Number U T D 9 9 1 3 0 1 7 4 8	C. Facility's Phone 801-323-8900	
11. Waste Shipping Name and Description		12. Containers No. Type	13. Total Quantity	14. Unit Wt/Vol
a. NON REGULATED MATERIAL, NONE, NONE		0 0 1 CM	Est. 4.4000	P
b.				
c.				
d.				
D. Additional Descriptions for Materials Listed Above 11a. CH217789B U 514900		E. Handling Codes for Wastes Listed Above		
15. Special Handling Instructions and Additional Information Emergency Telephone Number: Tooele Army Depot (435) 833-3504 Truck# 575 Container# 4595 U 514900				
16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.				
Printed/Typed Name Larry McFarland		Signature Larry McFarland		Month Day Year 10/15/03
17. Transporter 1 Acknowledgement of Receipt of Materials				
Printed/Typed Name Monty M. Kiserret		Signature Monty M. Kiserret		Month Day Year 10/15/03
18. Transporter 2 Acknowledgement of Receipt of Materials				
Printed/Typed Name		Signature		Month Day Year
19. Discrepancy Indication Space				
20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19. 2003009023				
Printed/Typed Name Ashley Maestas		Signature Ashley Maestas		Month Day Year 10/15/03

NON-HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No.	Manifest Doc. No.	2. Page 1 of 1						
3. Generator's Name and Mailing Address Tooele Army Depot SJMTE-CS-EO Bldg *8 Tooele, UT 84074		Attn: Larry McFarland								
4. Generator's Phone (435) 833-3504										
5. Transporter 1 Company Name MP Environmental Services, Inc.		6. US EPA ID Number C.A.T. 0-0-0-6-2-4-2-4-7	A. Transporter's Phone 877-800-5111							
7. Transporter 2 Company Name		8. US EPA ID Number	B. Transporter's Phone							
9. Designated Facility Name and Site Address Clean Harbors Grassy Mountain LLC. 3 Mi. E 7 Mi N of Knolls Exit 41 off I-80 Clive, UT 84029		10. US EPA ID Number U.T.D. 9.9.1.3.0.1.7.4.8	C. Facility's Phone 801-323-8900							
11. Waste Shipping Name and Description		12. Containers No.	13. Total Quantity Type	14. Unit Wt/Vol						
a. NON REGULATED MATERIAL, NONE, NONE		0.0.1	CM	Est. 44.000 P						
b.										
c.										
d.										
D. Additional Descriptions for Materials Listed Above 11a. CH217789B		E. Handling Codes for Wastes Listed Above								
		<table border="1"> <tr><td>CR</td><td>8</td></tr> <tr><td>FS</td><td>8</td></tr> <tr><td>OFFC</td><td></td></tr> </table>			CR	8	FS	8	OFFC	
CR	8									
FS	8									
OFFC										
15. Special Handling Instructions and Additional Information Emergency Telephone Number: Tooele Army Depot (435) 833-3504 Truck# <u>580</u> Container# <u>5254</u>										
16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.										
Printed/Typed Name Larry McFarland		Signature Larry McFarland		Month Day Year 11/01/503						
17. Transporter 1 Acknowledgement of Receipt of Materials										
Printed/Typed Name Curt Hanson		Signature Curt Hanson		Month Day Year 10/1/503						
18. Transporter 2 Acknowledgement of Receipt of Materials										
Printed/Typed Name		Signature		Month Day Year						
19. Discrepancy Indication Space										
20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.										
Printed/Typed Name Darryl Field		Signature Darryl Field		Month Day Year 11/01/503						

ORIGINAL - RETURN TO GENERATOR

**NON-HAZARDOUS
WASTE MANIFEST**

1. Generator's US EPA ID No.

U.T. 3-2-1-3-8-2-0-8-9-4

Manifest Doc. No.

N-4007

2. Page 1

of 1

3. Generator's Name and Mailing Address

Tooele Army Depot

SJMTE-CS-EO Bldg 8

Tooele, UT 84074

Attn: Larry McFarland

4. Generator's Phone (

435) 833-3504

5. Transporter 1 Company Name

MP Environmental Services, Inc.

6. US EPA ID Number

C-A-T-0-0-0-6-2-4-2-4-7

A. Transporter's Phone

877-800-5111

7. Transporter 2 Company Name

8. US EPA ID Number

B. Transporter's Phone

9. Designated Facility Name and Site Address

Clean Harbors Grassy Mountain, LLC.

3 MI. E 7 MI N of Knolls Exit off I-80

Clive, UT 84029

10. US EPA ID Number

U.T.D. 9-9-1-3-0-1-7-4-8

C. Facility's Phone

801-323-8900

11. Waste Shipping Name and Description

a.

NON REGULATED MATERIAL, NONE, NONE

12. Containers

No.

Type

13. Total Quantity

14. Unit WW/Vol

0.0.1

DT

est.

59.000

P

b.

c.

d.

CR

FS

OFFC

D. Additional Descriptions for Materials Listed Above

11a. CH217789B

E. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

Emergency Telephone Number: Tooele Army Depot (435) 833-3504

Truck# 605 Container# 3042

16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Typed Name

Larry McFarland

Signature

Larry McFarland

Month Day Year

10/15/03

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name

JOSEPH SHINDER FOR MP

Signature

Joseph Shinder

Month Day Year

10/15/03

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.

Printed/Typed Name

Arnell Maestas

Signature

Arnell Maestas

Month Day Year

10/16/03

ORIGINAL - RETURN TO GENERATOR

**NON-HAZARDOUS
WASTE MANIFEST**

1. Generator's US EPA ID No.

U.T.3.2.1.3.8.2.0.8.9.4

Manifest Doc. No.

N.4.0.0.8

2. Page 1

of 1

3. Generator's Name and Mailing Address

Tooele Army Depot
SJMTE-CS-EO Bldg 8 Attn: Larry McFarland

4. Generator's Phone

Tooele, UT 84074
(435) 833-3504

5. Transporter 1 Company Name

MP Environmental Services, Inc.

6. US EPA ID Number

C.A.T.0.0.0.6.2.4.2.4.7

A. Transporter's Phone

877-800-5111

7. Transporter 2 Company Name

8. US EPA ID Number

B. Transporter's Phone

9. Designated Facility Name and Site Address

Clean Harbors Grassy Mountain LLC
3 Mi. E 7 Mi. N of knolls Exit off I-80
Clive, UT 84029

10. US EPA ID Number

U.T.D.9.9.1.3.0.1.7.4.8

C. Facility's Phone

801-323-8900

11. Waste Shipping Name and Description

12. Containers

No.

Type

13. Total
Quantity14. Unit
Wt/Vol

a.

NON REGULATED MATERIAL, NONE, NONE

0.0.1

DT

Est.
5.2000

P

b.

c.

d.

D. Additional Descriptions for Materials Listed Above

11a. CH217789B

CR

FS

OFFC

E. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

Emergency Telephone Number: Tooele Army Depot (435) 833-3504

Truck# 572 Container# 3040

16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Typed Name

Larry McFarland

Signature

Larry McFarland

Month Day Year

11/01/03

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name

Richard Orr

Signature

Richard Orr

Month Day Year

10/15/03

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.

2003004007

Printed/Typed Name

Ashley Maestas

Signature

Ashley Maestas

Month Day Year

11/01/03

ORIGINAL - RETURN TO GENERATOR

NON-HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No.	Manifest Doc. No.	2. Page 1 of 1						
3. Generator's Name and Mailing Address Tooele Army Depot SJMTE-CS-EO Bldg 8 Tooele, UT 84074		Attn: Larry McFarland								
4. Generator's Phone (435) 833-3504										
5. Transporter 1 Company Name MP Environmental Services, Inc.		6. US EPA ID Number C.A.T. 0.0.0.6.2.4.2.4.7	A. Transporter's Phone 877-800-5111							
7. Transporter 2 Company Name		8. US EPA ID Number	B. Transporter's Phone							
9. Designated Facility Name and Site Address Clean Harbors Grassy Mountain LLC. 3 Mi. E 7 Mi. N of Knolls Exit off I-80 Clive, UT 84029		10. US EPA ID Number U.T.D. 9.9.1.3.0.1.7.4.8	C. Facility's Phone 801-323-8900							
11. Waste Shipping Name and Description			12. Containers No. Type	13. Total Quantity Est.						
a. NON REGULATED MATERIAL, NONE, NONE			0 0 1	CM 32.000 P						
b.										
c.										
d.										
D. Additional Descriptions for Materials Listed Above 11a. CH217789B			<table border="1"> <tr><td>CR</td><td>8</td></tr> <tr><td>FS</td><td>8</td></tr> <tr><td>OFFC</td><td></td></tr> </table>	CR	8	FS	8	OFFC		E. Handling Codes for Wastes Listed Above
CR	8									
FS	8									
OFFC										
15. Special Handling Instructions and Additional Information Emergency Telephone Number: Tooele Army Depot (435) 833-3504 Truck# 579 Container# C 25364D										
16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.										
Printed/Typed Name LARRY MCFARLAND		Signature Larry McFarland		Month Day Year 10/15/03						
17. Transporter 1 Acknowledgement of Receipt of Materials										
Printed/Typed Name Kelly Young		Signature Kelly Young		Month Day Year 10/15/03						
18. Transporter 2 Acknowledgement of Receipt of Materials										
Printed/Typed Name		Signature		Month Day Year						
19. Discrepancy Indication Space										
20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.										
Printed/Typed Name Bobby Fields		Signature Bobby Fields		Month Day Year 10/17/03						

ORIGINAL - RETURN TO GENERATOR

NON-HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. U.T.3.2.1.3.8.2.0.8.9.4	Manifest Doc. No. N4010	2. Page 1 of 1
3. Generator's Name and Mailing Address Tooele Army Depot SJMTE-CS-EO Bldg 8 Tooele, UT 84074		Attn: Larry McFarland		
4. Generator's Phone (435) 833-3504				
5. Transporter 1 Company Name MP Environmental Services, Inc.		6. US EPA ID Number CAT000624247	A. Transporter's Phone 877-800-5111	
7. Transporter 2 Company Name		8. US EPA ID Number	B. Transporter's Phone	
9. Designated Facility Name and Site Address Clean Harbors Grassy Mountain LLC. 3 MI. E 7 MI. N of Knolls Exit off I-80 Clive, UT 84029		10. US EPA ID Number UTD991301748	C. Facility's Phone 801-323-8900	
11. Waste Shipping Name and Description			12. Containers No. Type	13. Total Quantity
a. NON REGULATED MATERIAL, NONE, NONE			0.0.1 CM	Est. 40.000 P
b.				
c.				
d.				
D. Additional Descriptions for Materials Listed Above 11a. CH217789B			E. Handling Codes for Wastes Listed Above	
15. Special Handling Instructions and Additional Information Emergency Telephone Number: Tooele Army Depot (435) 833-3504 Truck# <u>575</u> Container# <u>5231</u> <u>U515351</u>				
16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.				
Printed/Typed Name LARRY MCFARLAND		Signature Larry McFarland		Month Day Year 10/15/03
17. Transporter 1 Acknowledgement of Receipt of Materials				
Printed/Typed Name MONTY MONSERRET		Signature Monty Monserret		Month Day Year 10/15/03
18. Transporter 2 Acknowledgement of Receipt of Materials				
Printed/Typed Name		Signature		Month Day Year
19. Discrepancy Indication Space				
20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.				
Printed/Typed Name Becky Fields		Signature Becky Fields		Month Day Year 10/17/03

ORIGINAL - RETURN TO GENERATOR

**NON-HAZARDOUS
WASTE MANIFEST**

1. Generator's US EPA ID No.

U.T. 3.2.1.3.8.2.0.8.9.4

Manifest Doc. No.

N.T.O.11

2. Page 1

of 1

3. Generator's Name and Mailing Address

Tooele Army Depot

SJMTE-CS-EO Bldg 8

Tooele, UT 84074

Attn: Larry McFarland

4. Generator's Phone

(435) 833-3504

5. Transporter 1 Company Name

MP Environmental Services, Inc.

6. US EPA ID Number

C.A.T.O.O.O.6.2.4.2.4.7

A. Transporter's Phone

877-800-5111

7. Transporter 2 Company Name

8. US EPA ID Number

B. Transporter's Phone

9. Designated Facility Name and Site Address

Clean Harbors Grassy Mountain, LLC.

3 Mi. E 7 Mi. N of Knolls Exit off I-80

Clive, UT 84029

10. US EPA ID Number

U.T.D.9.9.1.3.0.1.7.4.8

C. Facility's Phone

801-323-8900

11. Waste Shipping Name and Description

12. Containers

No.

Type

13. Total
Quantity14. Unit
Wt/Vol

a.

NON REGULATED MATERIAL, NONE, NONE

0.0.1

DT

Est.

4.9.000

P

b.

c.

d.

D. Additional Descriptions for Materials Listed Above

11a. CH217789B

CR

FS

OFFC

E. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

Emergency Telephone Number: Tooele Army Depot (435) 833-3504

Truck# 606

Container# 3108

16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Typed Name

LARRY MCFARLAND

Signature

Larry McFarland

Month Day Year

11.01.60.3

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name

Darrell Lloyd

Signature

Darrell Lloyd

Month Day Year

11.01.60.3

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.

Printed/Typed Name

Ashley Maestas

Signature

Ashley Maestas

Month Day Year

11.01.60.3

ORIGINAL - RETURN TO GENERATOR

HAZARDOUS
WASTE MANIFEST

1. Generator's US EPA ID No.

UT 3 2 1 3 8 2 0 8 9 4

Manifest Doc. No.

N 4 0 1 2

2. Page 1

of 1

3. Generator's Name and Mailing Address

Tooele Army Depot

SJMTE-CS-EO Bldg 8

Tooele, UT 84074

Attn: Larry McFarland

4. Generator's Phone

(435) 833-3504

5. Transporter 1 Company Name

MP Environmental Services, Inc.

6.

US EPA ID Number

C.A.T.0.0.0.6.2.4.2.4.7

A. Transporter's Phone

877-800-5111

7. Transporter 2 Company Name

8.

US EPA ID Number

B. Transporter's Phone

9. Designated Facility Name and Site Address

Clean Harbors Grassy Mountain, LLC.

3 Mi. E 7 Mi N of Knolls Exit off I-80

Clive, UT 84029

10.

US EPA ID Number

UTD 9 9 1 3 0 1 7 4 8

C. Facility's Phone

801-323-8900

11. Waste Shipping Name and Description

12. Containers

No.

Type

13. Total Quantity

14. Unit Wt/Vol

a.

NON REGULATED MATERIAL, NONE, NONE

0 0 1

Est.

58999

P

b.

c.

d.

D. Additional Descriptions for Materials Listed Above

11a. CH217789B

E. Handling Codes for Wastes Listed Above

CR

FS

OFFC

AM

15. Special Handling Instructions and Additional Information

Emergency Telephone Number: Tooele Army Depot (435) 833-3504

Truck# 571

Container# 3041

16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Typed Name

LARRY MCFARLAND

Signature

Larry McFarland

Month Day Year

10/16/03

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name

GARY HILL

Signature

Gary Hill

Month Day Year

10/16/03

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.

Printed/Typed Name

Amos Maestas

Signature

Amos Maestas

Month Day Year

11/01/03

ORIGINAL - RETURN TO GENERATOR

Please print or type
(Form designed for use on elite (12-pitch) typewriter.)

NON-HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. U T 3 2 1 3 8 2 0 8 9 4	Manifest Doc. No. W 4 0 1 3	2. Page 1 of 1
3. Generator's Name and Mailing Address Tooele Army Depot SJMTE-CS-EO Bldg 8 Attn: Larry McFarland Tooele, UT 84074				
4. Generator's Phone (435) 833-3504				
5. Transporter 1 Company Name MP Environmental Services, Inc.		6. US EPA ID Number C A T 0 0 0 6 2 4 2 4 7	A. Transporter's Phone 877-800-5111	
7. Transporter 2 Company Name		8. US EPA ID Number	B. Transporter's Phone	
9. Designated Facility Name and Site Address Clean Harbors Grassy Mountain LLC 3 Mi. E 7 Mi. N of Knolls Exit 41 off I-80 Clive, UT 84029		10. US EPA ID Number U T D 9 9 1 3 0 1 7 4 8	C. Facility's Phone 801-323-8900	
11. Waste Shipping Name and Description		12. Containers No. Type	13. Total Quantity	14. Unit Wt/Vol
a. NON REGULATED MATERIAL, NONE, NONE		0.0.1 DT	Est. 4.2000	P
b.				
c.				
d.				
D. Additional Descriptions for Materials Listed Above 11a. CH217789B		E. Handling Codes for Wastes Listed Above U515168		
15. Special Handling Instructions and Additional Information Emergency Telephone Number: Tooele Army Depot (435) 833-3504 Truck# 581 Container# 3110				
16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.				
Printed/Typed Name LARRY MCFARLAND		Signature Larry McFarland		Month Day Year 10/16/03
17. Transporter 1 Acknowledgement of Receipt of Materials				
Printed/Typed Name Jeffrey N Cornelius Sr		Signature Jeffrey N Cornelius Sr		Month Day Year 10/16/03
18. Transporter 2 Acknowledgement of Receipt of Materials				
Printed/Typed Name		Signature		Month Day Year
19. Discrepancy Indication Space				
20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19 2003004666				
Printed/Typed Name Ashley Macias		Signature Ashley Macias		Month Day Year 11/16/03

NON-HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. U T 3 2 1 3 8 2 0 8 9 4	Manifest Doc. No. N4014	2. Page 1 of 1
3. Generator's Name and Mailing Address Tooele Army Depot SJMTE-CS-EO Bldg 8 Attn: Larry McFarland Tooele, UT 84074				
4. Generator's Phone (435) 833-3504				
5. Transporter 1 Company Name MP Environmental Services, Inc.		6. US EPA ID Number C A T 0 0 0 6 2 4 2 4 7	A. Transporter's Phone 877-800-5111	
7. Transporter 2 Company Name		8. US EPA ID Number	B. Transporter's Phone	
9. Designated Facility Name and Site Address Clean Harbors Grassy Mountain LLC. 3 Mi. E 7 Mi. N of Knolls Exit 41 off I-80 Clive, UT 84029		10. US EPA ID Number U T D 9 9 1 3 0 1 7 4 8	C. Facility's Phone 801-323-8900	
11. Waste Shipping Name and Description		12. Containers No. Type	13. Total Quantity	14. Unit Wt/Vol
a. NON REGULATED MATERIAL, NONE, NONE		0 0 1 DT	Est. 5.76	
b.				
c.				
d.				
D. Additional Descriptions for Materials Listed Above 11a. CH217789B		E. Handling Codes for Wastes Listed Above		
15. Special Handling Instructions and Additional Information Emergency Telephone Number: Tooele Army Depot (435) 833-3504 Truck# <u>605</u> Container# <u>3042</u>				
16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.				
Printed/Typed Name LARRY MCFARLAND		Signature Larry McFarland		Month Day Year 10 16 03
17. Transporter 1 Acknowledgement of Receipt of Materials Printed/Typed Name JOSEPH SHINDEK FOR MP		Signature Joseph Shindek		Month Day Year 10 15 03
18. Transporter 2 Acknowledgement of Receipt of Materials Printed/Typed Name		Signature		Month Day Year
19. Discrepancy Indication Space				
20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.				
Printed/Typed Name Bucky Fields		Signature Bucky Fields		Month Day Year 11 01 03

ORIGINAL - RETURN TO GENERATOR

NON-HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. U T 3 2 1 3 8 2 0 8 9 4	Manifest Doc. No. 14015	2. Page 1 of 1
3. Generator's Name and Mailing Address Tooete Army Depot SJMTE-CS-EO Bldg 8 Attn: Larry McFarland Tooete, UT 84074				
4. Generator's Phone (435) 833-3504				
5. Transporter 1 Company Name MP Environmental Services, Inc.	6. US EPA ID Number C A T 0 0 0 6 2 4 2 4 7	A. Transporter's Phone 877-800-5111		
7. Transporter 2 Company Name	8. US EPA ID Number	B. Transporter's Phone		
9. Designated Facility Name and Site Address Clean Harbors Grassy Mountain LLC. 3 Mi. E 7 Mi. N of Knolls Exit 41 off I-80 Clive, UT 84029	10. US EPA ID Number U T D 9 9 1 3 0 1 7 4 8	C. Facility's Phone 801-323-8900		
11. Waste Shipping Name and Description		12. Containers No. Type	13. Total Quantity Est.	14. Unit Wt/Vol
a. NON REGULATED MATERIAL, NONE, NONE		0.01 CM	28000 44000	P
b.				
c.				
d.				
D. Additional Descriptions for Materials Listed Above 11a. CH217789B		CR FS OFFC	E. Handling Codes for Wastes Listed Above	
15. Special Handling Instructions and Additional Information Emergency Telephone Number: Tooete Army Depot (435) 833-3504 Truck# <u>581</u> Container# <u>4595</u>				
16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.				
Printed/Typed Name LARRY MCFARLAND		Signature <i>Larry McFarland</i>		Month Day Year 11/01/03
17. Transporter 1 Acknowledgement of Receipt of Materials Printed/Typed Name Jeffrey N Cornelius Sr		Signature <i>Jeffrey N Cornelius Sr</i>		Month Day Year 11/01/03
18. Transporter 2 Acknowledgement of Receipt of Materials Printed/Typed Name		Signature		Month Day Year
19. Discrepancy Indication Space				
20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.				
Printed/Typed Name BECKY FIELDS		Signature <i>Becky Fields</i>		Month Day Year 11/01/03

ORIGINAL - RETURN TO GENERATOR

**NON-HAZARDOUS
WASTE MANIFEST**

1. Generator's US EPA ID No.

U T 3 2 1 3 8 2 0 8 9 4

Manifest Doc. No.

NAO18

2. Page 1

of 1

3. Generator's Name and Mailing Address

Tooele Army Depot
SJMTE-CS-EO Bldg 8 Attn: Larry McFarland

4. Generator's Phone ()

UT 84074
435 833-3504

5. Transporter 1 Company Name

MP Environmental Services, Inc.

6. US EPA ID Number

C A T 0 0 0 6 2 4 2 4 7

A. Transporter's Phone

877-800-5111

7. Transporter 2 Company Name

8. US EPA ID Number

B. Transporter's Phone

9. Designated Facility Name and Site Address

Clean Harbors Grassy Mountain LLC.
3 Mi. E 7 Mi. N of Knolls Exit 41 off I-80
Clive, UT 84029

10. US EPA ID Number

U T D 9 9 1 3 0 1 7 4 8

C. Facility's Phone

801-323-8900

11. Waste Shipping Name and Description

a.
NON REGULATED MATERIAL, NONE, NONE

12. Containers

No. Type

0 0 1 DT

13. Total Quantity

Est.

62,000

14. Unit Wt/Vol

P

D. Additional Descriptions for Materials Listed Above

11a. CH217789B

CR

FS

OFFC

E. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

Emergency Telephone Number: Tooele Army Depot (435) 833-3504

Truck# 572 Container# 3040

16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Typed Name

LARRY MCFARLAND

Signature

Larry McFarland

Month Day Year

11/01/6103

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name

Richard Orr

Signature

Richard Orr

Month Day Year

11/01/6103

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.

Printed/Typed Name

Patty Fields

Signature

Patty Fields

Month Day Year

11/01/6103

ORIGINAL - RETURN TO GENERATOR

NON-HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. U.T.3.2.1.3.8.2.0.8.9.4	Manifest Doc. No. N4017	2. Page 1 of 1						
3. Generator's Name and Mailing Address Tooele Army Depot SJMTE-CS-EO Bldg 8 Tooele, UT 84074		Attn: Larry McFarland <i>dm</i>								
4. Generator's Phone (435) 8333504										
5. Transporter 1 Company Name MP Environmental Services, Inc.	6. US EPA ID Number C.A.T.0.0.0.6.2.4.2.4.7	A. Transporter's Phone 877-800-5111								
7. Transporter 2 Company Name	8. US EPA ID Number	B. Transporter's Phone								
9. Designated Facility Name and Site Address Clean Harbors Grassy Mountain LLC 3 Mi. E 7 Mi. N of Knolls Exit 41 off I-80 Clive, UT 84029		10. US EPA ID Number U.T.D.9.9.1.3.0.1.7.4.8	C. Facility's Phone 801-323-8900							
11. Waste Shipping Name and Description		12. Containers No.	13. Total Quantity	14. Unit Wt/Vol						
a. NON REGULATED MATERIAL, NONE, NONE		0.0.1	DT	Est. 42.000 P						
b.										
c.										
d.										
D. Additional Descriptions for Materials Listed Above 11a. CH217789B		E. Handling Codes for Wastes Listed Above								
15. Special Handling Instructions and Additional Information Emergency Telephone Number: Tooele Army Depot (435) 833-3504 Truck# <u>573</u> Container# <u>3109</u>										
<table border="1"> <tr> <td>CR</td> <td><i>am</i></td> </tr> <tr> <td>FS</td> <td><i>un</i></td> </tr> <tr> <td>OFFC</td> <td></td> </tr> </table>					CR	<i>am</i>	FS	<i>un</i>	OFFC	
CR	<i>am</i>									
FS	<i>un</i>									
OFFC										
16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.										
Printed/Typed Name <i>LARRY MCFARLAND</i>		Signature <i>Larry McFarland</i>		Month Day Year 10 11 603						
17. Transporter 1 Acknowledgement of Receipt of Materials										
Printed/Typed Name <i>Ned Anderson</i>		Signature <i>Ned Anderson</i>		Month Day Year 11 01 603						
18. Transporter 2 Acknowledgement of Receipt of Materials										
Printed/Typed Name		Signature		Month Day Year						
19. Discrepancy Indication Space										
20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.										
Printed/Typed Name <i>Wendy Riddle</i>		Signature <i>Wendy Riddle</i>		Month Day Year 11 01 603						

GENERATOR

TRANSPORTER

FACILITY

**NON-HAZARDOUS
WASTE MANIFEST**

1. Generator's US EPA ID No.

U.T.3.2.1.3.8.2.0.8.9.4

Manifest Doc. No.

114018

2. Page 1

of 1

3. Generator's Name and Mailing Address

Tooele Army Depot
 SJMTE-CS-EO Bldg 8 Attn: Larry McFarland
 Tooele, UT 84074
 4. Generator's Phone (435) 833-3504

5. Transporter 1 Company Name

MP Environmental Services, Inc.

6. US EPA ID Number

C.A.T.0.0.0.62.4.2.4.7

A. Transporter's Phone

877-800-5111

7. Transporter 2 Company Name

8. US EPA ID Number

B. Transporter's Phone

9. Designated Facility Name and Site Address

Clean Harbors Grassy Mountain LLC
 3 Mi. E 7 Mi. N of Knolls Exit 41 off I-80
 Clive, UT 84029

10. US EPA ID Number

U.T.D.9.9.1.3.0.1.7.4.8

C. Facility's Phone

801-323-8900

11. Waste Shipping Name and Description

a.
 NON REGULATED MATERIAL, NONE, NONE

12. Containers

No. Type

13. Total Quantity

14. Unit Wt/Vol

0.0.1 DT Est. 5.5.0.0.0 P

D. Additional Descriptions for Materials Listed Above

11a. CH217789B

E. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

Emergency Telephone Number: Tooele Army Depot (435) 833-3504

Truck# 571 Container# 3041

CR	<i>hr</i>
FS	<i>hr</i>
OFFC	

16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Typed Name

LARRY MCFARLAND

Signature

Larry McFarland

Month Day Year

11/01/603

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name

GARY HILL

Signature

Gary Hill

Month Day Year

11/01/603

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.

Printed/Typed Name

Wendy Riddle

Signature

Wendy Riddle

Month Day Year

11/01/6103

GENERATOR

TRANSPORTER

FACILITY

NON-HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. U.T.3.2.1.3.8.2.0.8.9.4	Manifest Doc. No. 44019	2. Page 1 of 1						
3. Generator's Name and Mailing Address Tooele Army Depot SJMTE-CS-EO Bldg 8 Attn: Larry McFarland Tooele, UT 84074										
4. Generator's Phone (435) 833-3504										
5. Transporter 1 Company Name MP Environmental Services, Inc.	6. US EPA ID Number C.A.T.0.0.0.6.2.4.2.4.7	A. Transporter's Phone 877-800-5111								
7. Transporter 2 Company Name	8. US EPA ID Number	B. Transporter's Phone								
9. Designated Facility Name and Site Address Clean Harbors Grassy Mountain LLC 3 Mi. E 7 Mi. N of Knolls Exit 41 off I-80 Clive, UT 84029	10. US EPA ID Number U.T.D.9.9.1.3.0.1.7.4.8	C. Facility's Phone 801-323-8900								
11. Waste Shipping Name and Description		12. Containers No. Type	13. Total Quantity	14. Unit Wt/Vol						
a. NON REGULATED MATERIAL, NONE, NONE		0.0.1 DT	Est. 44000	P						
b.										
c.										
d.										
D. Additional Descriptions for Materials Listed Above 11a. CH217789B		E. Handling Codes for Wastes Listed Above								
15. Special Handling Instructions and Additional Information Emergency Telephone Number: Tooele Army Depot (435) 833-3504 Truck# 606 Container# 310P										
<table border="1"> <tr> <td>CR</td> <td><i>MR</i></td> </tr> <tr> <td>FS</td> <td><i>MR</i></td> </tr> <tr> <td>OFFC</td> <td></td> </tr> </table>					CR	<i>MR</i>	FS	<i>MR</i>	OFFC	
CR	<i>MR</i>									
FS	<i>MR</i>									
OFFC										
16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.										
Printed/Typed Name LARRY MCFARLAND		Signature <i>Larry McFarland</i>		Month Day Year 11/01/07						
17. Transporter 1 Acknowledgement of Receipt of Materials										
Printed/Typed Name Darrell Lloyd		Signature <i>DL</i>		Month Day Year 10/16/07						
18. Transporter 2 Acknowledgement of Receipt of Materials										
Printed/Typed Name		Signature		Month Day Year						
19. Discrepancy Indication Space										
20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.										
Printed/Typed Name Wendy Riddle		Signature <i>Wendy Riddle</i>		Month Day Year 10/16/07						

ORIGINAL - RETURN TO GENERATOR

**NON-HAZARDOUS
WASTE MANIFEST**

1. Generator's US EPA ID No.

U.T.3.2.1.3.8.2.0.8.9.4

Manifest Doc. No.

N4020

2. Page 1

of 1

3. Generator's Name and Mailing Address

Tooele Army Depot

SJMTE-CS-EO Bldg 8

Attn: Larry McFarland

Tooele, UT 84074

4. Generator's Phone (435 833-3504

5. Transporter 1 Company Name

MP Environmental services, Inc.

6. US EPA ID Number

C A T 0 0 0 6 2 4 2 4 7

A. Transporter's Phone

877-800-5111

7. Transporter 2 Company Name

8. US EPA ID Number

B. Transporter's Phone

9. Designated Facility Name and Site Address

Clean Harbors Grassy Mountain LLC,

3 Mi. E 7 Mi. N of Knolls Exit 41 off I-80

Clive, UT 84029

10. US EPA ID Number

U T D 9 9 1 3 0 1 7 4 8

C. Facility's Phone

801-323-8900

11. Waste Shipping Name and Description

a.

NON REGULATED MATERIAL, NONE, NONE

12. Containers

No.

Type

13. Total Quantity

14. Unit Wt/Vol

0 0 1

Est.

36000

P

b.

c.

d.

CR

FS

OFFC

D. Additional Descriptions for Materials Listed Above

11a. CH217789B

E. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

Emergency Telephone number: Tooele Army Depot (435) 833-3504

Truck# 581 Container # 4596

16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Typed Name

LARRY MCFARLAND

Signature

Larry McFarland

Month Day Year

10/16/03

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name

Jeffrey N Corneliuss Jr

Signature

Jeffrey N Corneliuss Jr

Month Day Year

10/16/03

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

19. Discrepancy Indication Space Per Aaron Armstrong Item 12. Container Type is CM. 10/17/03

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.

Printed/Typed Name

Becky Fields

Signature

Becky Fields

Month Day Year

12/01/03

2003004098

GENERATOR

TRANSPORTER

FACILITY

NON-HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. U.T. 3.2.1.3.8.2.0.8.9.4	Manifest Doc. No. W4021	2. Page 1 of 1
3. Generator's Name and Mailing Address Tooele Army Depot SMJTE-CS-EO Bldg 8 Attn: Larry McFarland Tooele, UT 84074				
4. Generator's Phone (435) 833-3504				
5. Transporter 1 Company Name MP Environmental Services, Inc.	6. US EPA ID Number C.A.T.0.0.0.6.2.4.2.4.7	A. Transporter's Phone 877-800-5111		
7. Transporter 2 Company Name	8. US EPA ID Number	B. Transporter's Phone		
9. Designated Facility Name and Site Address Clean Harbors Grassy Mountain LLC 3 Mi. E 7 Mi. N of Knolls Exit 41 off I-80 Clive, UT 84029	10. US EPA ID Number U.T.D.9.9.1.3.0.1.7.4.8	C. Facility's Phone 801-323-8900		
11. Waste Shipping Name and Description	12. Containers No. Type	13. Total Quantity	14. Unit Wt/Vol	
a. NON REGULATED MATERIAL, NONE, NONE	0.0.1 DT EM	Est. 57000	P	
b.				
c.				
d.				
D. Additional Descriptions for Materials Listed Above 11a. CH217789B	E. Handling Codes for Wastes Listed Above			
15. Special Handling Instructions and Additional Information Emergency Telephone Number: Tooele Army Depot (435) 833-3504 Truck# 605 Container# 3042				
16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.				
Printed/Typed Name LARRY MCFARLAND		Signature <i>Larry McFarland</i>		Month Day Year 10/16/03
17. Transporter 1 Acknowledgement of Receipt of Materials				
Printed/Typed Name JOSEPH SHINDER FOR MP		Signature <i>Joseph Shinder</i>		Month Day Year 10/16/03
18. Transporter 2 Acknowledgement of Receipt of Materials				
Printed/Typed Name		Signature		Month Day Year
19. Discrepancy Indication Space				
20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.				
Printed/Typed Name BARRY FIELDS		Signature <i>Barry Fields</i>		Month Day Year 10/17/03

ORIGINAL - RETURN TO GENERATOR

NON-HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No.	Manifest Doc. No.	2. Page 1 of 1
3. Generator's Name and Mailing Address Tooele Army Depot SMITE-CS-EO Bldg 8 Attn: Larry McFarland Tooele, UT 84074		4. Generator's Phone (435) 833-3504	6. US EPA ID Number C A T 0 0 0 6 2 4 2 4 7	A. Transporter's Phone 877-800-5111
5. Transporter 1 Company Name MP Environmental Services, Inc.		7. Transporter 2 Company Name	8. US EPA ID Number	B. Transporter's Phone
9. Designated Facility Name and Site Address Clean Harbors Grassy Mountain LLC. 3 Mi. E 7 Mi. N of Knolls Exit 41 off I-80 Clive, UT 84029		10. US EPA ID Number U T D 9 9 1 3 0 1 7 4 8	C. Facility's Phone 801-323-8100	
11. Waste Shipping Name and Description			12. Containers No. Type	13. Total Quantity Est.
a. NON REGULATED MATERIAL, NONE, NONE			0.01- BT CM	30.000 P
b.				
c.				
d.				
D. Additional Descriptions for Materials Listed Above 11a. CH217789B			E. Handling Codes for Wastes Listed Above	
15. Special Handling Instructions and Additional Information Emergency Telephone Number: Tooele Army Depot (435) 833-3504 Truck# <u>581</u> Container# <u>3855 5222</u>				
16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.				
Printed/Typed Name LARRY MCFARLAND		Signature Larry McFarland		Month Day Year 11/01/6103
17. Transporter 1 Acknowledgement of Receipt of Materials Printed/Typed Name Jeffrey N Corneilsen Sr		Signature Jeffrey N Corneilsen		Month Day Year 10/1/503
18. Transporter 2 Acknowledgement of Receipt of Materials Printed/Typed Name		Signature		Month Day Year
19. Discrepancy Indication Space 2003004096				
20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.				
Printed/Typed Name BARRY FIELDS		Signature Barry Fields		Month Day Year 11/01/703

ORIGINAL - RETURN TO GENERATOR

Please print or type
(Form designed for use on elite (12-pitch) typewriter.)

NON-HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No.	Manifest Doc. No.	2. Page 1 of 1
3. Generator's Name and Mailing Address Tooele Army Depot SUMTE-CS-EO Bldg 8 Attn: Larry McFarland Tooele, UT 84074				
4. Generator's Phone (435) 833-3504				
5. Transporter 1 Company Name MP Environmental Services, Inc.	6. US EPA ID Number CAT 000624247	A. Transporter's Phone 877-800-5111		
7. Transporter 2 Company Name	8. US EPA ID Number	B. Transporter's Phone		
9. Designated Facility Name and Site Address Clean Harbors Grassy Mountain LLC. 3 MI. E 7 MI. N of Knolls Exit 41 off I-80 Clive, UT 84029		10. US EPA ID Number UTD 991301748	C. Facility's Phone 801-323-8900	
11. Waste Shipping Name and Description		12. Containers No. Type	13. Total Quantity	14. Unit Wt/Vol
a. NON REGULATED MATERIAL, NONE, NONE		0 0 1	Est.	P
b.				
c.				
d.				
D. Additional Descriptions for Materials Listed Above 11a. CH217789B U 515264		E. Handling Codes for Wastes Listed Above		
15. Special Handling Instructions and Additional Information Emergency Telephone Number: Tooele Army Depot (*435) 833-3504 Truck# 580 Container # 5190				
16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.				
Printed/Typed Name LARRY MCFARLAND		Signature Larry McFarland		Month Day Year 10 20 03
17. Transporter 1 Acknowledgement of Receipt of Materials				
Printed/Typed Name Curt Hanson		Signature Curt Hanson		Month Day Year 11 02 03
18. Transporter 2 Acknowledgement of Receipt of Materials				
Printed/Typed Name /		Signature		Month Day Year
19. Discrepancy Indication Space				
20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19. 2003004700				
Printed/Typed Name Ashley Maestas		Signature Ashley Maestas		Month Day Year 11 02 03

Please print or type
(Form designed for use on elite (12-pitch) typewriter.)

NON-HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. U.T.3.2.1.3.8.2.0.8.9.4	Manifest Doc. No. W4024	2. Page 1 of 1
3. Generator's Name and Mailing Address Tooele Army Depot SJMTE-CS-EO Bldg 8 Attn: Larry McFarland Tooele, UT 84074				
4. Generator's Phone (435) 833-3504				
5. Transporter 1 Company Name MP Environmental Services, Inc.	6. US EPA ID Number CAT 000624247	A. Transporter's Phone 877-800-5111		
7. Transporter 2 Company Name	8. US EPA ID Number	B. Transporter's Phone		
9. Designated Facility Name and Site Address Clean Harbors Grassy Mountain LLC. 3 Mi. E 7 Mi. N of Knolls Exit 41 off I-80 Clive, UT 84029	10. US EPA ID Number UTD 991301748	C. Facility's Phone 801-323-8900		
11. Waste Shipping Name and Description a. NON REGULATED MATERIAL, NONE, NONE b. c. d.		12. Containers No.	Type	13. Total Quantity
		0.0.1		Est. 18000 P
D. Additional Descriptions for Materials Listed Above 11a. CH217789B		E. Handling Codes for Wastes Listed Above		
15. Special Handling Instructions and Additional Information Emergency Telephone Number: Tooele Army Depot (435) 833-3504 Truck# <u>581</u> Container# <u>5204</u>				
16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.				
Printed/Typed Name LARRY MCFARLAND		Signature Larry McFarland Month Day Year 10/20/03		
17. Transporter 1 Acknowledgement of Receipt of Materials				
Printed/Typed Name Jeffrey N Cornelius Sr		Signature Jeffrey N Cornelius Sr Month Day Year 10/20/03		
18. Transporter 2 Acknowledgement of Receipt of Materials				
Printed/Typed Name		Signature Month Day Year		
19. Discrepancy Indication Space				
20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 16				
Printed/Typed Name Armen Maestas		Signature Armen Maestas Month Day Year 10/20/03		

Please print or type
from designated for use on this (12-point) specimen

NON-HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. U.T.3.2.1.3.8.2.0.8.9.4	Manifest Doc. No. N4025	2. Page 1 of 1	
3. Generator's Name and Mailing Address Tooele Army Depot SJMTE-CS-EO Bldg 8 Attn: Larry McFarland Tooele, UT 84074					
4. Generator's Phone (435) 833-3504					
5. Transporter 1 Company Name MP Environmental Services, Inc.		6. US EPA ID Number C.A.T.0.0.0.6.2.4.2.4.7	A. Transporter's Phone 877-800-5111		
7. Transporter 2 Company Name		8. US EPA ID Number	B. Transporter's Phone		
9. Designated Facility Name and Site Address Clean Harbors Grassy Mountain LLC 3 Mi. E 7 Mi. N of Knolls Exit 41 off I-80 Clive, UT 84029		10. US EPA ID Number U.T.D.9.9.1.3.0.1.7.4.8	C. Facility's Phone 801-323-8900		
11. Waste Shipping Name and Description			12. Containers No. Type	13. Total Quantity	14. Unit Wt/Vol
a. NON REGULATED MATERIAL, NONE, NONE			0.0.1	Est. 5.6.0.0.0	P
b.					
c.					
d.					
D. Additional Descriptions for Materials Listed Above 11a. CH217789B U515305			E. Handling Codes for Wastes Listed Above		
15. Special Handling Instructions and Additional Information Emergency Telephone Number: Tooele Army Depot (435) 833-3504 Truck# 605 Container# 3042					
16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.					
Printed/Typed Name LARRY MCFARLAND		Signature Larry McFarland		Month Day Year 10 20 03	
17. Transporter 1 Acknowledgement of Receipt of Materials					
Printed/Typed Name JOSEPH SHINDER FOR MP		Signature Joseph Shinder		Month Day Year 10 20 03	
18. Transporter 2 Acknowledgement of Receipt of Materials					
Printed/Typed Name		Signature		Month Day Year	
19. Discrepancy Indication Space					
20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19. 200304120					
Printed/Typed Name Arnell Maestas		Signature Arnell Maestas		Month Day Year 10 20 03	

NON-HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. U T 3 2 1 3 8 2 0 8 9 4	Manifest Doc. No. W 4 0 2 6	2. Page 1 of 1
3. Generator's Name and Mailing Address Tooele Army Depot SJMTE-CS-Eo Bldg 8 Attn: Larry McFarland Tooele, UT 84074				
4. Generator's Phone (435) 833-3504				
5. Transporter 1 Company Name MP Environmental Services, Inc.	6. US EPA ID Number C A T 0 0 0 6 2 4 2 4 7	A. Transporter's Phone 877-800-5111		
7. Transporter 2 Company Name	8. US EPA ID Number	B. Transporter's Phone		
9. Designated Facility Name and Site Address Clean Harbors Grassy Mountain LLC 3 Mi E 7 Mi N of Knolls Exit 41 off I-80 Clive, UT 84029	10. US EPA ID Number U T D 9 9 1 3 0 1 7 4 8	C. Facility's Phone 801-323-8900		
11. Waste Shipping Name and Description		12. Containers No. Type	13. Total Quantity	14. Unit Wt/Vol
a. NON REGULATED MATERIAL, NONE, NONE		0 0 1	Est. 60000	P
b.				
c.				
d.				
D. Additional Descriptions for Materials Listed Above 11a. CH217789B		E. Handling Codes for Wastes Listed Above		
15. Special Handling Instructions and Additional Information Emergency Telephone Number: Tooele Army Depot (435) 833-3504 Truck# 572 Container # 3090 <div style="text-align: right;">U515329</div>				
16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.				
Printed/Typed Name LARRY MCFARLAND		Signature Larry McFarland		Month Day Year 10 20 03
17. Transporter 1 Acknowledgement of Receipt of Materials				
Printed/Typed Name Richard Orr		Signature Richard Orr		Month Day Year 10 20 03
18. Transporter 2 Acknowledgement of Receipt of Materials				
Printed/Typed Name		Signature		Month Day Year
19. Discrepancy Indication Space				
20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.				
Printed/Typed Name Ashley Maestas		Signature Ashley Maestas		Month Day Year 10 20 03

NON-HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. UT 3 2 1 3 8 2 0 8 9 4	Manifest Doc. No. N4027	2. Page 1 of 1						
3. Generator's Name and Mailing Address Tooele Army Depot SUMTE-CS-EO Bldg 8 Attn: Larry McFarland Tooele, UT 84074										
4. Generator's Phone (435) 833-3504										
5. Transporter 1 Company Name MP Environmental Services, Inc.	6. US EPA ID Number CAT 0 0 0 6 2 4 2 4 7	A. Transporter's Phone 877-800-5111								
7. Transporter 2 Company Name	8. US EPA ID Number	B. Transporter's Phone								
9. Designated Facility Name and Site Address Clean Harbors Grassy Mountain LLC 3 Mi. E 7 Mi. N of Knolls Exit 41 off I-80 Clive, UT 84029	10. US EPA ID Number UTD 9 9 1 3 0 1 7 4 8	C. Facility's Phone 801-323-8900								
11. Waste Shipping Name and Description		12. Containers No. Type	13. Total Quantity	14. Unit Wt/Vol						
a. NON REGULATED MATERIAL, NONE, NONE		0 0 1 CM	Est. 41 0 0 0	P						
b.										
c.										
d.										
D. Additional Descriptions for Materials Listed Above 11a CH217789B		E. Handling Codes for Wastes Listed Above								
15. Special Handling Instructions and Additional Information Emergency Telephone Number: Tooele Army Depot (435) 833-3504 Truck# 581 Container# 5066		<table border="1"> <tr> <td>CR</td> <td></td> </tr> <tr> <td>FS</td> <td>AM</td> </tr> <tr> <td>OFFC</td> <td></td> </tr> </table>			CR		FS	AM	OFFC	
CR										
FS	AM									
OFFC										
16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.										
Printed/Typed Name LARRY MCFARLAND		Signature Larry McFarland		Month Day Year 10/20/03						
17. Transporter 1 Acknowledgement of Receipt of Materials										
Printed/Typed Name Jeffrey N Corneliussen		Signature Jeffrey N Corneliussen		Month Day Year 10/20/03						
18. Transporter 2 Acknowledgement of Receipt of Materials										
Printed/Typed Name		Signature		Month Day Year						
19. Discrepancy Indication Space										
20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.										
Printed/Typed Name Bucky Fields		Signature Bucky Fields		Month Day Year 10/20/03						

ORIGINAL - RETURN TO GENERATOR

NON-HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. U.T.3.2.1.3.8.2.0.8.9.4	Manifest Doc. No. N4028	2. Page 1 of 1
3. Generator's Name and Mailing Address Tooele Army Depot SJMTE-CS-EO Bldg 8 Attn: Larry McFarland Tooele, UT 84074				
4. Generator's Phone (435) 833-3504				
5. Transporter 1 Company Name MP Environmental Services, Inc.	6. US EPA ID Number C.A.T.0.0.0.6.2.4.2.4.7	A. Transporter's Phone 877-800-5111		
7. Transporter 2 Company Name	8. US EPA ID Number	B. Transporter's Phone		
9. Designated Facility Name and Site Address Clean Harbors Grassy Mountain LLC 3 Mi E 7 Mi N of Knolls Exit 41 off I-80 Clive, UT 84029		10. US EPA ID Number U.T.D.9.9.1.3.0.1.7.4.8	C. Facility's Phone 802-323-8900	
11. Waste Shipping Name and Description		12. Containers No. Type	13. Total Quantity	14. Unit Wt/Vol
a. NON REGULATED MATERAIL, NONE, NONE		0.0.1 DT	Est. 56000	P
b.				
c.				
d.				
11a. Additional Descriptions for Materials Listed Above CH217789B U515289		E. Handling Codes for Wastes Listed Above		
15. Special Handling Instructions and Additional Information Emergency Telephone Number: Tooele Army Depot (435) 833-3504 Truck# 573 Container# 3041				
16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.				
Printed/Typed Name LARRY MCFARLAND		Signature Larry McFarland		Month Day Year 10/20/03
17. Transporter 1 Acknowledgement of Receipt of Materials				
Printed/Typed Name Ned Anderton		Signature Ned Anderton		Month Day Year 10/20/03
18. Transporter 2 Acknowledgement of Receipt of Materials				
Printed/Typed Name		Signature		Month Day Year
19. Discrepancy Indication Space				
20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19. 200304132				
Printed/Typed Name Aimey Maestas		Signature Aimey Maestas		Month Day Year 11/20/03

NON-HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. U.T.3.2.1.2.8.2.0.8.9.4	Manifest Doc. No. N4029	2. Page 1 of 1
3. Generator's Name and Mailing Address Tooele Army Depot SJMT-ES-EO Bldg 8 Tooele, UT 84074		Attn: Larry McFarland		
4. Generator's Phone (435) 833-3504				
5. Transporter 1 Company Name MP Environmental Services, Inc.	6. US EPA ID Number CAT.0.0.0.6.2.4.2.4.7	A. Transporter's Phone 877-800-5111		
7. Transporter 2 Company Name	8. US EPA ID Number	B. Transporter's Phone		
9. Designated Facility Name and Site Address Clean Harbors Grassy Mountain LLC 3 Mi. E 7 Mi. N of Knolls Exit 41 off I-80 Clive, UT 84029	10. US EPA ID Number UTD.9.9.1.3.0.1.7.4.8	C. Facility's Phone 801-323-8900		
11. Waste Shipping Name and Description		12. Containers No. Type	13. Total Quantity	14. Unit Wt/Vol
a. NON REGULATED MATERIAL, NONE, NONE		1	CM	Est. 41000 P
b.				
c.				
d.				
D. Additional Descriptions for Materials Listed Above 11a. CH217789B		E. Handling Codes for Wastes Listed Above		
		U515265		
15. Special Handling Instructions and Additional Information Emergency Telephone Number: Tooele Army Depot (435) 833-3504 Truck# 580 Container# 5375 AM				
16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.				
Printed/Typed Name LARRY MCFARLAND		Signature Larry McFarland		Month Day Year 10 20 03
17. Transporter 1 Acknowledgement of Receipt of Materials		Signature Curt Hanson		Month Day Year 10 20 03
18. Transporter 2 Acknowledgement of Receipt of Materials		Signature		Month Day Year
19. Discrepancy Indication Space				
20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.				
Printed/Typed Name Ashley Maestas		Signature Ashley Maestas		Month Day Year 10 22 03

Please print or type
(Form designed for use on a 12-pitch typewriter.)

NON-HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. U.T.3.2.1.3.8.2.0.8.9.4	Manifest Doc. No. W4030	2. Page 1 of 1
3. Generator's Name and Mailing Address Tooele Army Depot SJMTE-CS-EO Bldg 8 Tooele, UT 84074		Attn: Larry McFarland		
4. Generator's Phone (435) 833-3504				
5. Transporter 1 Company Name MP Environmental Services, Inc.		6. US EPA ID Number C A T 0 0 0 6 2 4 2 4 7	A. Transporter's Phone 877-800-5111	
7. Transporter 2 Company Name		8. US EPA ID Number	B. Transporter's Phone	
9. Designated Facility Name and Site Address Clean Harbor Grassy Mountain LLC 3 Mi E 7 Mi N of Knolls 41 off I-80 Clive, UT 84029		10. US EPA ID Number U T D 9 9 1 3 0 1 7 4 8	C. Facility's Phone 801-323-8900	
11. Waste Shipping Name and Description		12. Containers No.	13. Total Quantity	14. Unit Wt/Vol
a. NON REGULATED MATERIAL, NONE, NONE		0.0.1	Est. 48000	P
b.				
c.				
d.				
D. Additional Descriptions for Materials Listed Above 11a CH217789B		E. Handling Codes for Wastes Listed Above		
15. Special Handling Instructions and Additional Information Emergency Telephone Number: Tooele Army Depot (435) 83303504 Truck# 575 Container # 3110		U515352		
16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.				
Printed/Typed Name LARRY MCFARLAND		Signature Larry McFarland		Month Day Year 10 20 03
17. Transporter 1 Acknowledgement of Receipt of Materials		Signature Monty Munserret		Month Day Year 10 20 03
18. Transporter 2 Acknowledgement of Receipt of Materials		Signature		Month Day Year
19. Discrepancy Indication Space				
20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19. 200300A133				
Printed/Typed Name Ashley Maestas		Signature Ashley Maestas		Month Day Year 10 20 03

Please print or type
(Form designed for use on a 12-pin dot matrix printer.)

**NON-HAZARDOUS
WASTE MANIFEST**

1. Generator's US EPA ID No.

U.T. 3.2.1.3.8.2.0.8.9.4

Manifest Doc. No.

U4031

2. Page 1

of 1

3. Generator's Name and Mailing Address

Tooele Army Depot

SJMTE-CS-EO Bldg 8

Tooele, UT 84074

Attn: Larry McFarland

4. Generator's Phone (435 833-3504

5. Transporter 1 Company Name

ME Environmental Services, Inc.

6. US EPA ID Number

C.A.T. 0.0.0.6.2.4.2.4.7

A. Transporter's Phone

877-800-5111

7. Transporter 2 Company Name

8. US EPA ID Number

B. Transporter's Phone

9. Designated Facility Name and Site Address

Clean Harbors Grassy Mountain LLC

3 Mi E 7 Mi N of Knolls Exit 41 off I-80

Clive, UT 84029

10. US EPA ID Number

U.T.D. 9.9.1.3.0.1.7.4.8

C. Facility's Phone

801-323-8900

11. Waste Shipping Name and Description

a.

NON REGULATED MATERIAL, NONE, NONE

12. Containers
No. Type

0.0.1

DT

13. Total
Quantity

Est. 4.2000

14. Unit
Wt/Vol

P

D. Additional Descriptions for Materials Listed Above

11a. CH 217789B

E. Handling Codes for Wastes Listed Above

U515401

15. Special Handling Instructions and Additional Information

Emergency Telephone Number: Tooele Army Depot (435) 833-3504

Truck# 606

Container# 3108

16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Typed Name

LARRY MCFARLAND

Signature

Larry McFarland

Month Day Year

10 20 03

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name

Darren Lloyd

Signature

DL

Month Day Year

10 20 03

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.

Printed/Typed Name

Arnel Maestas

Signature

Arnel Maestas

Month Day Year

10 20 03

**NON-HAZARDOUS
WASTE MANIFEST**

1. Generator's US EPA ID No.

U T 3 2 1 3 8 2 0 8 9 4

Manifest Doc. No.

NA032

2. Page 1

of 1

3. Generator's Name and Mailing Address

Tooele, Army Depot

SJMTE-CS-EO Bldg 8

Tooele, UT 84074

Attn: Larry McFarland

4. Generator's Phone (435) 833-3504

5. Transporter 1 Company Name

MP Environmental Services, Inc.

6. US EPA ID Number

C A T 0 0 0 6 2 4 2 4 7

A. Transporter's Phone

877-800-5111

7. Transporter 2 Company Name

8. US EPA ID Number

B. Transporter's Phone

9. Designated Facility Name and Site Address

Clean Harbors Grassy Mountain LLC

3 Mi E 7 Mi N of Knolls Exit 41 off I-80

Clive, ut 84029

10. US EPA ID Number

U T D 9 9 1 3 0 1 7 4 8

C. Facility's Phone

801-323-8900

11. Waste Shipping Name and Description

a. NON REGULATED MATERIAL, NONE, NONE

12. Containers

No.

Type

13. Total
Quantity14. Unit
Wt/Vol

0 0 1

CM 24000

Est.

P

D. Additional Descriptions for Materials Listed Above

11a. CH217789B

E. Handling Codes for Wastes Listed Above

CR
FS
OFFC

15. Special Handling Instructions and Additional Information

Emergency Telephone Number: Tooele Army Depot (435) 833-3504

Truck# 580 Container# 5177

16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Typed Name

LARRY MCFARLAND

Signature

Larry McFarland

Month Day Year

10 20 03

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name

Curt Hanson

Signature

Curt Hanson

Month Day Year

11 01 20 03

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.

Printed/Typed Name

Ashley Maestas

Signature

Ashley Maestas

Month Day Year

11 01 20 03

ORIGINAL - RETURN TO GENERATOR

**NON-HAZARDOUS
WASTE MANIFEST**

1. Generator's US EPA ID No.

U T 3 2 1 3 8 2 0 8 9 4

Manifest Doc. No.

N 4033

2. Page 1

of 1

3. Generator's Name and Mailing Address

Tooele Army Depot

SJMTE-CS-EO Bldg 8

Attn: Larry McFarland

Tooele, UT 84074

4. Generator's Phone (

435)

833-3504

5. Transporter 1 Company Name

MP Environmental Services, Inc.

6. US EPA ID Number

C A T 0 0 0 6 2 4 2 4 7

A. Transporter's Phone

877-800-5111

7. Transporter 2 Company Name

8. US EPA ID Number

B. Transporter's Phone

9. Designated Facility Name and Site Address

Clean Harbors Grassy Mountain LLC

3 Mi E 7 Mi N of Knolls Exit 41 off I-80

Clive, UT 84029

10. US EPA ID Number

U T D 9 9 1 3 0 1 7 4 8

C. Facility's Phone

801-323-8900

11. Waste Shipping Name and Description

a.

NON REGULATED MATERIAL, NONE, NONE

12. Containers

No.

Type

13. Total

Quantity

14. Unit

Wt/Vol

0 0 1

CM

24000

P

Est.

D. Additional Descriptions for Materials Listed Above

11a. CH217789B

CR

FS

OFFC

E. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

Emergency Telephone Number: Tooele Army Depot (435) 833-3504

Truck#

581

Container#

5054

16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Typed Name

LARRY MCFARLAND

Signature

Larry McFarland

Month Day Year

10/29/03

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name

Jeffrey N Cornelius Sr

Signature

Jeffrey N Cornelius Sr

Month Day Year

11/02/03

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.

Printed/Typed Name

Becky Fields

Signature

Becky Fields

Month Day Year

11/02/03

ORIGINAL - RETURN TO GENERATOR

NON-HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. UT 3 2 1 3 8 2 0 8 9 4	Manifest Doc. No. W4034	2. Page 1 of 1
3. Generator's Name and Mailing Address Tooele Army Depot SJMTE-CS-EO Bldg 8 Tooele, UT 84074 Attn: Larry McFarland				
4. Generator's Phone (435) 833-3504				
5. Transporter 1 Company Name MP Environmental Services, Inc.		6. US EPA ID Number C A T 0 0 0 6 2 4 2 4 7	A. Transporter's Phone 877-800-5111	
7. Transporter 2 Company Name		8. US EPA ID Number	B. Transporter's Phone	
9. Designated Facility Name and Site Address Clean Harbors Grassy Mountain LLC 3 Mi E 7 Mi N of Knolls Exit 41 off I-80 Clive, UT 84029		10. US EPA ID Number U T D 9 9 1 3 0 1 7 4 8	C. Facility's Phone 801-323-8900	
11. Waste Shipping Name and Description		12. Containers No. Type	13. Total Quantity	14. Unit Wt/Vol
a. NON REGULATED MATERIAL, NONE, NONE		0 0 1 07	Est. #2000	P
b.				
c.		AM		
d.				
D. Additional Descriptions for Materials Listed Above 11a. CH217789B		E. Handling Codes for Wastes Listed Above		
		4515017		
15. Special Handling Instructions and Additional Information Emergency Telephone Number: Tooele Army Depot (435) 833-3504 Truck# 577 Container# 3109				
16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.				
Printed/Typed Name LARRY MCFARLAND		Signature Larry McFarland		Month Day Year 10 20 03
17. Transporter 1 Acknowledgement of Receipt of Materials				
Printed/Typed Name Ted Cracraft		Signature Ted Cracraft		Month Day Year 10 20 05
18. Transporter 2 Acknowledgement of Receipt of Materials				
Printed/Typed Name		Signature		Month Day Year
19. Discrepancy Indication Space				
20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.				
Printed/Typed Name Ashley Maestas		Signature Ashley Maestas		Month Day Year 11 01 20 05

Please print or type
(Form designed for use on a 12-point typewriter)

NON-HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. U.T.3.2.1.3.8.2.0.8.9.4	Manifest Doc. No. W4035	2. Page 1 of 1		
3. Generator's Name and Mailing Address Tooele Army Depot SJMTE-CS-EO Bldg 8 Attn: Larry McFarland Tooele, UT 84074						
4. Generator's Phone (435) 833-3504						
5. Transporter 1 Company Name MP Environmental Services, Inc.		6. US EPA ID Number C.A.T.0.0.0.6.2.4.2.4.7		A. Transporter's Phone 877-800-5111		
7. Transporter 2 Company Name		8. US EPA ID Number		B. Transporter's Phone		
9. Designated Facility Name and Site Address Clean Harbors Grassy Mountain LLC 3 Mi E 7 Mi N of Knolls Exit 41 off I-80 Clive, ut 84029		10. US EPA ID Number U.T.D.9.9.1.3.0.1.7.4.8		C. Facility's Phone 801-323-8900		
11. Waste Shipping Name and Description a. NON REGULATED MATERIAL, NONE, NONE b. c. d.			12. Containers No.	Type	13. Total Quantity Est.	14. Unit Wt/Vol
			0.0.1	DT	5.4.4.4.4	P
D. Additional Descriptions for Materials Listed Above 11a. CH217789B U 515290			E. Handling Codes for Wastes Listed Above			
15. Special Handling Instructions and Additional Information Emergency Telephone Number: Tooele Army Depot (435) 833-3504 Truck# <u>573</u> Contianer# <u>3041</u> AM						
16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.						
Printed/Typed Name LARRY MCFARLAND		Signature Larry McFarland		Month Day Year 10 20 03		
17. Transporter 1 Acknowledgement of Receipt of Materials						
Printed/Typed Name Ned Anderton		Signature Ned Anderton		Month Day Year 10 20 03		
18. Transporter 2 Acknowledgement of Receipt of Materials						
Printed/Typed Name		Signature		Month Day Year		
19. Discrepancy Indication Space						
20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19. 2003004152						
Printed/Typed Name Ashley Maestas		Signature Ashley Maestas		Month Day Year 10 21 03		

NON-HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. U.T.3.2.1.3.8.2.0.8.9.4	Manifest Doc. No. W4036	2. Page 1 of 1
3. Generator's Name and Mailing Address Tooele Army Depot SJMTE-CS-EO Bldg 8 Attn: Larry McFarland Tooele, UT 84074				
4. Generator's Phone (435) 833-3504				
5. Transporter 1 Company Name MP Environmental Services, Inc.		6. US EPA ID Number CAT 000624247	A. Transporter's Phone 877-800-5111	
7. Transporter 2 Company Name		8. US EPA ID Number	B. Transporter's Phone	
9. Designated Facility Name and Site Address Clean Harbors Grassy Mountain LLC 3 Mi E 7 Mi N of Knolls Exit 41 off I-80 Clive, UT 84029		10. US EPA ID Number UTD 991301748	C. Facility's Phone 801-323-8900	
11. Waste Shipping Name and Description		12. Containers No. Type	13. Total Quantity	14. Unit Wt/Vol
a. NON REGULATED MATERIAL, NONE, NONE		0.01	Est. 549.66	P
b.				
c.				
d.				
D. Additional Descriptions for Materials Listed Above 11a CH217789B		E. Handling Codes for Wastes Listed Above U515330		
15. Special Handling Instructions and Additional Information Emergency Telephone Number: Tooele Army Depot (435)833-3504 Truck# 572 Container# 3040 AM				
16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.				
Printed/Typed Name LARRY MCFARLAND		Signature Larry McFarland		Month Day Year 10/20/03
17. Transporter 1 Acknowledgement of Receipt of Materials				
Printed/Typed Name RICHARD ORR		Signature Richard Orr		Month Day Year 10/20/03
18. Transporter 2 Acknowledgement of Receipt of Materials				
Printed/Typed Name		Signature		Month Day Year
19. Discrepancy Indication Space				
20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.				
Printed/Typed Name BRIAN FIELDS		Signature Brian Fields		Month Day Year 10/21/03

NON-HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. U.T.3.2.1.3.8.2.0.8.9.4	Manifest Doc. No. W-4037	2. Page 1 of 1	
3. Generator's Name and Mailing Address Tooele Army Depot SJMTE-CS-EO Bldg 8 Attn: Larry McFarland Tooele, UT 84074					
4. Generator's Phone (435) 833-3504					
5. Transporter 1 Company Name MP Environmental Services, Inc.	6. US EPA ID Number C.A.T.0.0.0.6.2.4.2.4.7	A. Transporter's Phone 877-800-5111			
7. Transporter 2 Company Name	8. US EPA ID Number	B. Transporter's Phone			
9. Designated Facility Name and Site Address Clean Harbors Grassy Mountain LLC. 3 Mi. E 7 Mi. N of Knolls Exit 41 off I-80 Clive, UT 84029	10. US EPA ID Number U.T.D.9.9.1.3.0.1.7.4.8	C. Facility's Phone 801-323-8900			
11. Waste Shipping Name and Description		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. NON REGULATED MATERIAL, NONE, NONE		0.0.1	CM	Est. 38000	P
b.					
c.					
d. AM					
D. Additional Descriptions for Materials Listed Above 11a. CH217789B		E. Handling Codes for Wastes Listed Above			
		U515427			
15. Special Handling Instructions and Additional Information Emergency Telephone Number: Tooele Army Depot (435) 833-3504 Truck# 581 Container# 5197					
16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.					
Printed/Typed Name LARRY MCFARLAND		Signature Larry McFarland		Month Day Year 10/20/03	
17. Transporter 1 Acknowledgement of Receipt of Materials		Signature Jeffrey N Cornelius Sr		Month Day Year 10/20/03	
18. Transporter 2 Acknowledgement of Receipt of Materials		Signature		Month Day Year	
19. Discrepancy Indication Space					
20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19. 2003004180					
Printed/Typed Name Ashley Maestas		Signature Ashley Maestas		Month Day Year 11/01/03	

Please print or type
(Form designed for use on elite (12-pitch) typewriter.)

NON-HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. U.T. 3.2.1.3.8.2.0.8.9.4	Manifest Doc. No. W 4038	2. Page 1 of 1
3. Generator's Name and Mailing Address Tooele Army Depot SJMTE-CS-EO Bldg 8 Attn: Larry McFarland Tooele, UT 84074				
4. Generator's Phone (435) 833-3504				
5. Transporter 1 Company Name MP Environmental Services, Inc.	6. US EPA ID Number C-A-T-0-0-0-5-2-4-2-4-7	A. Transporter's Phone 877-800-5111		
7. Transporter 2 Company Name	8. US EPA ID Number	B. Transporter's Phone		
9. Designated Facility Name and Site Address Clean Harbors Grassy Mountain LLC. 3 Mi. E 7 Mi. N of Knolls Exit 41 off I-80 Clive, ut 84074		10. US EPA ID Number U.T.D.9.9.1.3.0.1.7.4.8	C. Facility's Phone 801-323-8900	
11. Waste Shipping Name and Description		12. Containers No.	13. Total Quantity	14. Unit Wt/Vol
a. NON REGULATED MATERIAL, NONE, NONE		0.01	CM 350.00	P
b.				
c.				
d.				
D. Additional Descriptions for Materials Listed Above 11a. CH217789B U515267		E. Handling Codes for Wastes Listed Above AM		
15. Special Handling Instructions and Additional Information Emergency Telephone Number: Tooele Army Depot (435) 833-3504 Truck# 580 Container# 5219				
16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.				
Printed/Typed Name LARRY MCFARLAND		Signature Larry McFarland		Month Day Year 10 20 03
17. Transporter 1 Acknowledgement of Receipt of Materials				
Printed/Typed Name Curt Hansen		Signature Curt Hansen		Month Day Year 10 20 03
18. Transporter 2 Acknowledgement of Receipt of Materials				
Printed/Typed Name /		Signature		Month Day Year
19. Discrepancy Indication Space				
20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19. 2003004211				
Printed/Typed Name Arlene Maestas		Signature Arlene Maestas		Month Day Year 11 12 03